# Product Catalog

## Voyager™ — TS*/YS*/WS*
## Packaged Cooling, Gas/Electric & Heat Pump
15–25 Tons, 50 Hz

August 2012

RT-PRC034-EN

# Introduction

***Packaged Gas/Electric***

***Packaged Cooling/Heat Pump***

## Packaged Rooftop Air Conditioners

Through the years, Trane has designed and developed the most complete line of Packaged Rooftop products available in the market today. Trane was the first to introduce the Micro—microelectronic unit controls—and has continued to improve and revolutionize this design concept.

The ReliaTel control platform offers the same great features and functionality as the original Micro, with additional benefits for greater application flexibility.

Voyager continues to provide the highest standards in quality and reliability, comfort, ease of service, and the performance of Trane light commercial products.

Trane customers demand products that provide exceptional reliability, meet stringent performance requirements, and are competitively priced. Trane delivers with Voyager.

Voyager features cutting edge technologies: reliable compressors, Trane engineered ReliaTel controls, computer-aided run testing, and Integrated Comfort™ Systems. So, whether you're the contractor, the engineer, or the owner you can be certain Voyager Products are built to meet your needs.

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### Revision Summary

RT-PRC034-EN (20 August 2012)

- New configurable model number
- New optional features: Condensate Overflow Switch, MERV 8 and Filter Removal Tool, Stainless Steel Drain Pan
- Updated Features/Benefits, Model Number Description, General Data, Electrical Data, Mechanical Specifications

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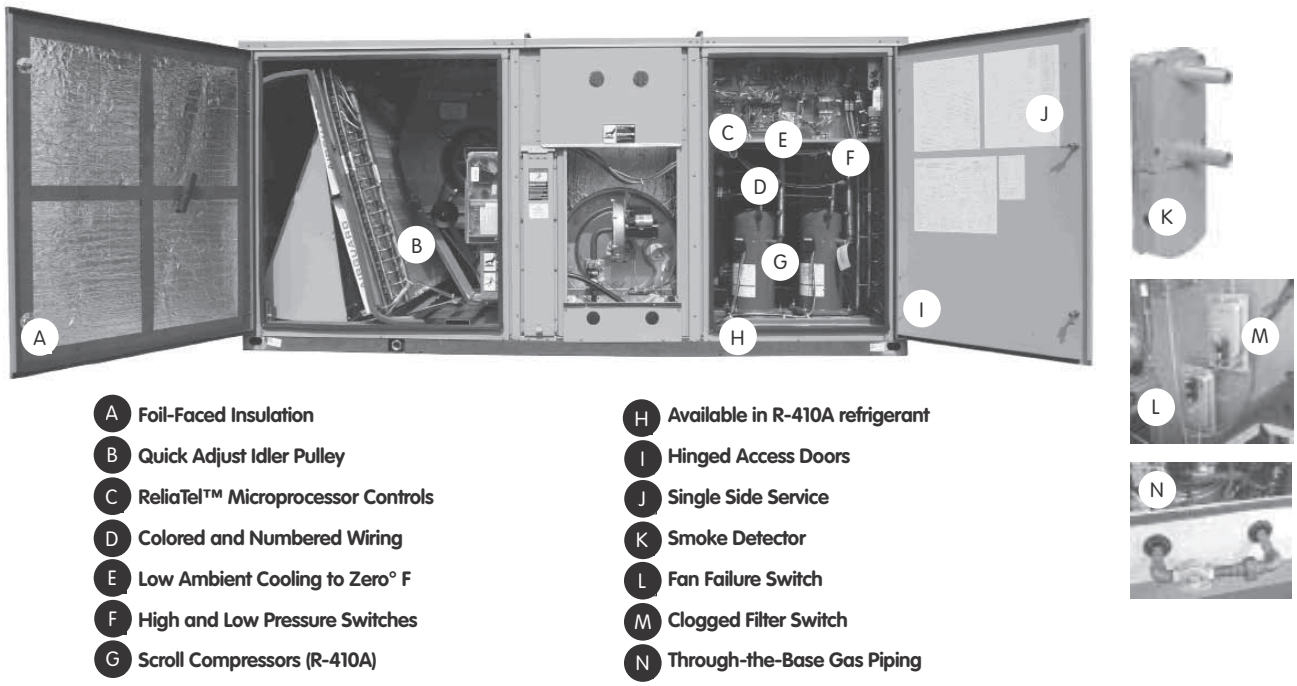
# Features and Benefits

**Figure 1. Factory installed options**




- A Foil-Faced Insulation
- B Quick Adjust Idler Pulley
- C ReliaTel™ Microprocessor Controls
- D Colored and Numbered Wiring
- E Low Ambient Cooling to Zero° F
- F High and Low Pressure Switches
- G Scroll Compressors (R-410A)
- H Available in R-410A refrigerant
- I Hinged Access Doors
- J Single Side Service
- K Smoke Detector
- L Fan Failure Switch
- M Clogged Filter Switch
- N Through-the-Base Gas Piping

## Standard Features

- 2” throwaway filters provided on 15–25 ton units
- Anti-Short Cycle Timer
- Belt Drive Motors
- Colored and Numbered Wiring
- Crankcase Heaters
- Dedicated Airflow
- Discharge Line Thermostat
- Easy Access Low Voltage Terminal Board (LTB)
- Foil-Faced and Edge Captured Insulation
- High Efficiency Drum and Tube Heat Exchanger
- High Efficiency Gas Heat with Hot Surface Ignition
- High Pressure Cutout
- IAQ Sloped Condensate Drain Pan
- Liquid Line Refrigerant Drier
- Low Ambient Cooling to 0°F
- Microchannel Type Condenser Coils (Major Design Sequence F, T and Y Units Only)
- Operating Charge of R-410A
- Patented Hybrid Condenser Coil for Easy cleaning
- Phase Monitor
- Provisions for Through-the-Base Gas and Condensate Drain Connections
- Quick Access Panels
- Quick Adjust Idler Arm Pulley
- ReliaTel™ Microprocessor Controls

- Single Point Power
- Single Side Service
- Standardized Components
- Trane Built Scroll Compressors
- U-shaped Airflow Pattern

# Options

## Factory Installed Options*[10]

- 2" MERV 8 or MERV 13 Filters with Filter Removal Tool
- Black Epoxy Pre-Coated Coils[4, 11]
- $CO_2$ Sensor Wiring (Wiring Only)
- Complete Coat™ Microchannel Condenser Coil
- Condensate Overflow Switch
- Hinged Access Doors
- Stainless Steel Drain Pan
- Stainless Steel Heat Exchanger with 10 year warranty[4]
- Through the Base Electrical Access
- Through the Base Electrical with Circuit Breaker[8, 9]
- Through the Base Electrical with Disconnect Switch[5, 8, 9]

## Factory* or Field Installed Options[10]

*Note: *Some Factory Installed Options (FIOPS) available for Downflow Air Discharge units only. Please verify with ordering system for availability.*
*Explanation of Notes 1–10 located on page 23 following Model Number Description.*

- Clogged Filter/Fan Failure Switch[2, 4]
- Discharge Air Sensing Kit[2, 4]
- Economizer - Downflow
- Electric Heaters[4, 6, 9]
- Frostat[2, 4]
- LonTalk® Communications Interface (LCI)[4]
- ReliaTel™ Options Module[7]
- Trane Communications Interface (TCI)[1, 4]

## Field Installed Options

- Barometric Relief
- $CO_2$ Sensor
- Digital Display Zone Sensor
- Economizer - Horizontal
- High and Low Static Drive Kits
- LP Conversion Kit
- Manual Outside Air Damper
- Motorized Outside Air Dampers
- Oversized Motors
- Reference or Comparative Enthalpy[3, 4]
- Remote Potentiometer
- Roof Curb (Downflow Only)
- Thermostat
- Tool-less Hail Guards
- Ventilation Override Accessory[2]
- Zone Sensors and Remote Zone Sensors

# Other Benefits

- Cabinet Design Ensures Water Integrity
- Ease of Service, Installation and Maintenance
- Mixed Model Build Enables “Fastest in the Industry” Ship Cycle Times
- Outstanding Airflow Distribution
- ReliaTel™ Controls benefits
- Rigorous Testing
- Unmatched Product Support
- Varitrac

# Standard Features

### Anti-Short Cycle Timer (Standard with ReliaTel™)

Provides a 3 minute minimum “ON” time and 3 minute “OFF” time for compressors to enhance compressor reliability by assuring proper oil return.

### Colored And Numbered Wiring

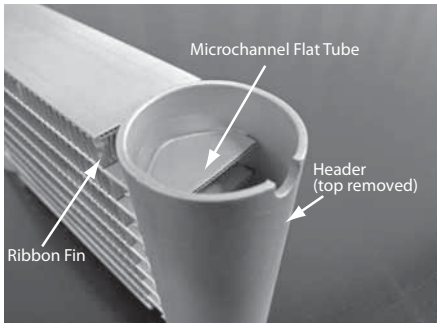
Save time and money tracing wires and diagnosing the unit.

### Compressors

Voyager contains the best compressor technology available to achieve the highest possible performance.

Dual compressors are outstanding for humidity control, light load cooling conditions and system back-up applications. Dual compressors are available on all models.

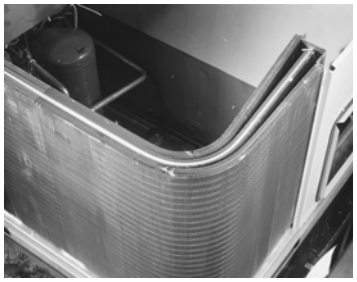
### Microchannel Condenser Coil




Microchannel coils have better heat transfer performance due to flat streamlined tubes with small ports, and metallurgical tube-to-fin bond.

Microchannel condenser coil can reduce system refrigerant charge by up to 50% (potential LEED credit) because of smaller internal volume, which can lead to better compressor reliability. Compact all aluminum microchannel coils also help to reduce the unit weight. All-aluminum construction improves recyclability. Galvanic corrosion is also minimized due to all aluminum construction. Strong aluminum brazed structure provides better fin protection.

## Condenser Coil



Voyager boasts a patent-pending 1+1+1 condenser coil, permanently gapped for easy cleaning.

## Controls—ReliaTel

ReliaTel™ microprocessor controls provide unit control for heating, cooling and ventilating utilizing input from sensors that measure indoor and outdoor temperature and other zone sensors. ReliaTel also provides outputs for building automation systems and expanded diagnostics.
For a complete list of ReliaTel offerings, refer to "Other Benefits," p. 12.

## Conversionless Units

The dedicated design units (either downflow or horizontal) require no panel removal or alteration time to convert in the field—a major cost savings during installation. Horizontal units come complete with duct flanges so the contractor doesn't have to field fabricate them. These duct flanges are a time and cost saver.

## Crankcase Heaters

These band heaters provide improved compressor reliability by warming the oil to prevent migration during off-cycles or low ambient conditions. These are standard on all Voyager models.

## Discharge Line Thermostat

A bi-metal element discharge line thermostats installed as a standard option on the discharge line of each system. This standard option provides extra protection to the compressors against high discharge temperatures in case of loss of charge, extremely high ambient and other conditions which could drive the discharge temperature higher.

## Easy Access Low Voltage Terminal Board

Voyager's Low Voltage Terminal Board is external to the electrical control cabinet. It is extremely easy to locate and attach the thermostat wire and test operation of all unit functions. This is another cost and time saving installation feature.

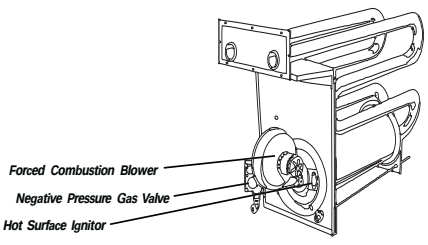
## Foil Faced Insulation

All panels in the evaporator section of the unit have cleanable foil-faced insulation. All edges are either captured or sealed to ensure no insulation fibers get into the airstream.

## Heat Exchanger—Drum and Tube

The cabinet (pictured right) features a drum and tube heat exchanger that is manufactured using aluminized steel with stainless steel components for maximum durability.

The requirement for cycle testing of heat exchangers is 10,000 cycles by ANSI Z21.47. This is the standard required by both UL and AGA for cycle test requirements.



The drum and tube design has been tested and passed over 150,000 cycles, which is over 15 times the current ANSI cycling requirements. The negative pressure gas valve will not allow gas flow unless the combustion blower is operating. This is one of our unique safety features.

The forced combustion blower supplies pre-mixed fuel through a single stainless steel burner screen into a sealed drum where ignition takes place. It is more reliable to operate and maintain than a multiple burner system.

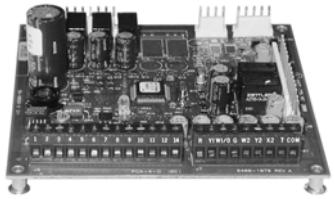
The hot surface ignitor is a gas ignition device which doubles as a safety device utilizing a continuous test to prove the flame. The design is cycle tested at the factory for quality and reliability. Our gas/electric rooftops exceed all California seasonal efficiency requirements and perform even better than the California $NO_X$ emission requirements.

### Low Ambient Cooling

All Voyager microprocessor units have cooling capabilities down to 0°F as standard.

### Low Voltage Connections

The wiring of the low voltage connections to the unit and the zone sensors is as simple as 1-1, 2-2, and 3-3. This simplified system makes it easy for the installer to wire.



### Motors

All indoor fan motors are belt drive as standard.

### Pressure Cutouts

Low and high pressure cutouts are standard on all Voyager models.

### Phase Monitor

The Phase Monitor is a three-phase line monitor module that protects against phase loss, phase reversal and phase unbalance. It is intended to protect compressors from reverse rotation. It has an operating input voltage range of 190–600 Vac, and LED indicators for ON and FAULT. There are no field adjustments and the module will automatically reset from a fault condition.

### Quick-Access Panels

Remove three or more screws for access to the standardized internal components and wiring.

### Quick-Adjust Slider Plate

With the Quick-Adjust Slider Plate, the belt and sheaves can be quickly adjusted without moving the mounted fan motor. The result is a major savings in time and money.

### Single Point Power

A single electrical connection powers the unit.

### Single Side Service

Single side service is standard on all units.

### Sloped Drain Pans

Every Voyager unit has a non-corrosive, sloped drain pan made of pre-painted steel and standard on all units.

### Standardized Components

Components are placed in the same location on all Voyager units. Familiarize yourself with one Voyager and you are familiar with every Voyager.

Due to standardized components throughout the Voyager line, contractors/owners can stock fewer parts.

### Through the Base Condensate

Every unit includes provisions for through the base condensate drain connections. This allows the drain to be connected through the roof curb instead of a roof penetration.

# Variety of Options[1]

## Factory Installed Options

### Black Epoxy Pre-Coated Coils (W Units Only)

The pre-coated coils are an economical option for protection in mildly corrosive environments.

### Circuit Breaker (Required with Through-the-Base Electrical)

This option is a factory installed thermal magnetic, molded case, HACR Circuit Breaker with provisions for through the base electrical connections. Available on all models.

### $CO_2$ Sensor Wiring

This is the unit wiring for field installed $C0_2$ sensors. Factory-installed $C0_2$ sensor wiring saves time and ensures proper unit connections for the field installed $C0_2$ sensor kits.

### Complete Coat™ Condenser Coil (T/Y Units Only)

The cathodic epoxy type electrodisposition coating is formulated for high edge build to a number of different types of heat exchangers. The coating is selected to provide excellent resistance and durability to corrosive effects of alkalies, acids, alcohols, petroleum, seawater, salt air, and corrosive environments. This coating shall be available on microchannel condenser coils.

### Condensate Overflow Switch

A condensate overflow switch is available to shut the unit down in the event that the condensate drain line becomes clogged. This option protects the unit from water overflowing from the drain pan and entering the base of the units.

### Disconnect Switch (Required with Through-the-Base Electrical)

Factory installed three-pole, molded case, disconnect switch with provisions for through the base electrical connections are available. Available on all models.

Codes require a method of assured unit shutdown for servicing. Field-installed disconnects sometimes interfere with service access. Factory installation of unit disconnects reduces costs, assures proper mounting and provides the opportunity to upgrade to unit circuit breaker protection.

[1] Refer to Model Number Description for option availability.

### High Efficiency Filtration

Voyager units offer a variety of high efficiency filtration options. MERV 8 and MERV 13 filters provide additional filtration beyond the capabilities of typical 2” throwaway filters. Also, when MERV 8 or MERV 13 filters are ordered, units come equipped with a filter removal tool.

### Hinged Access Doors

These doors permit easy access to the filter, fan/heat, and compressor/control sections. They reduce the potential roof damage from screws or sharp access door corners.

### Stainless Steel Drain Pan

For excellent corrosion and oxidation resistance, the optional stainless steel drain pan provides a cleanable surface that complement other IAQ solutions such as high efficiency filtration (MERV 8 or 13), or demand control ventilation ($CO_2$).

### Stainless Steel Heat Exchanger

The optional stainless steel heat exchanger is constructed of 304 stainless steel. It is resistant to corrosion and oxidation and easy to clean. The high strength to weight ratio allows for high ventilation rates with gas units. With this option, a 10-year stainless steel heat exchanger warranty is standard.

### Through-the-Base Electrical Utility Access

An electrical service entrance shall be provided allowing electrical access for both control and main power connections inside the curb and through the base of downflow units, and through the front of horizontal units. Option will allow for field installation of liquid-tight conduit and an external field installed disconnect switch.

Factory provided through the base openings simplify wiring and piping. Because these utility openings frequently minimize the number of roof penetrations, the integrity of roofing materials is enhanced.

## Factory or Field Installed Options[1]

### Clogged Filter/Fan Failure Switch

A dedicated differential pressure switch is available to achieve active fan failure indication and/or clogged filter indication.

These sensors allow a zone sensor service light or Integrated Comfort System to indicate a dirty filter or a fan that’s not working. The field installation charges for these valuable feedback devices often eliminate them from consideration. Factory installation can make such features a good investment.

### Discharge Air Sensing Kit

Provides true discharge air sensing in heating models. The kit is functional only with the ReliaTel™ Options Module.

### Economizer - Downflow

Economizers are equipped with either dry bulb or reference or comparative enthalpy sensing. These economizers provide free cooling as the outdoor temperature and/or humidity decreases. Correctly installed, they offer a valuable energy savings.

[1] Refer to Model Number Description for option availability.

### Electric Heaters

Electric heat modules are available within the basic unit. If ordering the Through the Base Electrical option with an Electrical Heater, the heater must be factory installed.

### Frostat™

This capillary bulb embedded in the face of the evaporator coil monitors coil temperature to prevent evaporator icing and protect the compressor. Recommended for applications with low leaving air temperatures, low airflow and or high latent load applications.

### LonTalk® Communications Interface

The LonTalk communications interface allows the unit to communicate as a Tracer™LCI-V device or directly with generic LonTalk Network Building Automation System Controls.

### Motors

Factory or field installed oversized motors available for high static applications are available.

### Oversized Motors

Factory or field installed oversized motors available for high static applications.

### Reference or Comparative Enthalpy

Measures and communicates humidity while maximizing comfort control.

### Trane Communication Interface (TCI)

Available factory or field installed. This module when applied with the ReliaTel™ easily interfaces with Trane's Integrated Comfort™ System.

*Refer to Model Number Description for option availability.

## Field Installed Options[1]

### Barometric Relief

Designed to be used on downflow units, barometric relief is an unpowered means of relieving excess building pressure.

### $CO_2$ Sensor - Demand Control Ventilation (DCV)

Demand-controlled ventilation (DCV) is a control strategy that responds to the actual demand (need) for ventilation by regulating the rate at which the HVAC system brings outdoor air into the building. A $CO_2$ sensor measures the concentration (parts per million, ppm) of $CO_2$ (Carbon Dioxide) in the air. As the $CO_2$ concentration changes, the outside air damper modulates to meet the current ventilation needs of the zone. The $CO_2$ sensor kit is available as a field installed accessory.

*Note: Choose factory-installed $CO_2$ sensor wiring option to save time and ensure proper unit connections for the field installed $CO_2$ sensor kits.*

### Dampers

0–25 percent manual or 0–50 percent motorized outside air dampers are available.

### Digital Display Zone Sensor

The Digital LCD (Liquid Crystal Display) zone sensor has the look and functionality of standard zone sensors. This sensor should be utilized with ReliaTel™ controls.

[1] Refer to Model Number Description for option availability.

### Economizer - Horizontal

Economizers are equipped with either dry bulb or reference or comparative enthalpy sensing. These economizers provide free cooling as the outdoor temperature and/or humidity decreases. Correctly installed, they offer a valuable energy savings.

### High Static Drive

Available on many models, this high static drive accessory extends the capability of the standard motor. Avoid expensive motors and operating costs by installing this optimized sheave accessory.

### LP Conversion Kit

Provided for field conversion of gas/electric units from Natural gas to Propane.

### Remote Potentiometer

When properly installed in the economizer control circuitry, this accessory provides a remote variable resistance to enable the operator to adjust the minimum damper position.

### Roof Curbs

Available for downflow units. Only two roof curbs for the entire Voyager line simplifies curb selection.

### Tool-less Hail Guards

Tool-less, hail protection quality coil guards shall be field-installed for condenser coil protection. This option protects the condenser coil from vandalism and/or hail damage.

### Ventilation Override Accessory

With the Ventilation Override Accessory installed, the unit can be set to transition to up to three different pre-programmed sequences for Smoke Purge, Pressurization, and Exhaust. The transition occurs when a binary input on the RTOM is closed (shorted). This would typically be a hard wired relay output from a smoke detector or fire control panel.

### Zone Sensors/Thermostats

Available in programmable, automatic and manual styles.

*Note: Zone sensor required for units configured for Single Zone VAV indoor fan system control to enable Single Zone VAV functionality.*

## Other Benefits

### Airflow Distribution

Airflow is outstanding. The Voyager can replace an older machine with old ductwork and, in many cases, improve the comfort through better air distribution. The U-shaped airflow allows for improved static capabilities.

### Cabinet Integrity

For added water integrity, Voyager has a raised 1 1/8” lip around the supply and return of the downflow units to prevent water from blowing into the ductwork.

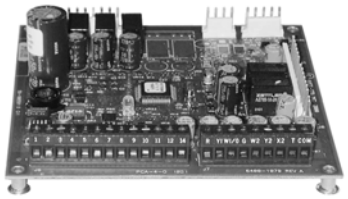
## Easy to Install, Service and Maintain

Because today's owners are very cost-conscious when it comes to service and maintenance, the Trane Voyager was designed with direct input from service contractors. This valuable information helped to design a product that would get the serviceman off the job quicker and save the owner money. Voyager does this by offering outstanding standard features enhanced by a variety of factory and field installed options, multiple control options, rigorously tested proven designs and superior product and technical support.

## Outstanding Airflow Distribution

Airflow is outstanding. The Voyager can replace an older machine with old ductwork and, in many cases, improve the comfort through better air distribution.

## ReliaTel Controls Benefits



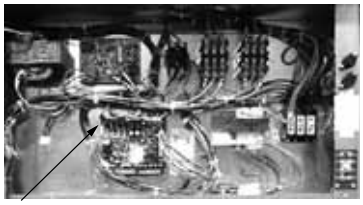
ReliaTel™ controls provide unit control for heating, cooling and ventilating utilizing input from sensors that measure outdoor and indoor temperature.

### *ReliaTel Control Logic Enhances Quality and Reliability*

- prevents the unit from short cycling, considerably improving compressor life.
- ensures that the compressor will run for a specific amount of time which allows oil to return for better lubrication, enhancing the reliability of the compressor.

Voyager with ReliaTel™ reduces the number of components required to operate the unit, thereby reducing possibilities for component failure.

### *ReliaTel Makes Installing and Servicing Easy*



ReliaTel™

ReliaTel™ eliminates the need for field installed anti-shortcycle timer and time delay relays. ReliaTel™ controls provide these functions as an integral part of the unit. The contractor no longer has to purchase these controls as options and pay to install them. The wiring of the low voltage connections to the unit and the zone sensors is as easy as 1-1, 2-2, and 3-3. This simplified system makes wiring easier for the installer.

### *ReliaTel Makes Testing Easy*

ReliaTel™ requires no special tools to run the Voyager unit through its paces. Simply place a jumper between Test 1 and Test 2 terminals on the Low Voltage Terminal Board and the unit will walk through its operational steps automatically.

The unit automatically returns control to the zone sensor after stepping through the test mode a single time, even if the jumper is left on the unit.

As long as the unit has power and the "system on" LED is lit, ReliaTel is operational. The light indicates that the controls are functioning properly.

ReliaTel features expanded diagnostic capabilities when utilized with Trane Integrated Comfort™ Systems.

Some zone sensor options have central control panel lights which indicate the mode the unit is in and possible diagnostic information (dirty filters for example).

### *Other ReliaTel Benefits*

The ReliaTel™ built-in anti-shortcycle timer, time delay relay and minimum "on" time control functions are factory tested to assure proper operation.

ReliaTel softens electrical “spikes” by staging on fans, compressors and heaters.

Intelligent Fallback is a benefit to the building occupant. If a component goes astray, the unit will continue to operate at predetermined temperature setpoint.

Intelligent Anticipation is a standard ReliaTel feature. It functions continuously as ReliaTel and zone sensor(s) work together in harmony to provide much tighter comfort control than conventional electro-mechanical thermostats.

The same ReliaTel Board fits all Voyager Packaged Gas/Electrics, Cooling, and Heat Pump models. This provides standardization of parts for contractors. Less money is tied up in inventory with ReliaTel.

## Rigorous Testing

All of Voyager’s designs were rigorously rain tested at the factory to ensure water integrity. Actual shipping tests were performed to determine packaging requirements. Units were test shipped around the country to determine the best packaging. Factory shake and drop tests were used as part of the package design process to help assure that the unit arrives at the job site in top condition. Rigging tests include lifting a unit into the air and letting it drop one foot, assuring that the lifting lugs and rails hold up under stress.

The evaporator and condenser coils are leak tested at 225 psig and pressure tested to 450 psig. All parts are inspected at the point of final assembly. Sub-standard parts are identified and rejected immediately.

Every unit receives a 100 percent unit run test before leaving the production line to make sure it lives up to rigorous Trane requirements. Voyager units incorporate either a one piece top or the Trane-Tite-Top ($T^3$). Each part of the top (either two or three pieces) overlaps in such a way that water cannot leak into the unit. These overlapped edges are gasketed and sealed to ensure superior water integrity.

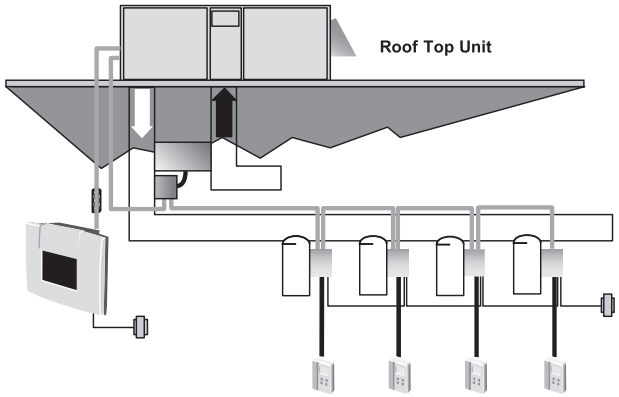
## Unmatched Support

Trane Sales Representatives are a Support Group that can assist you with:

- Product
- Application
- Service
- Training
- Special Applications
- Specifications
- Computer Programs and much more

## VariTrac—Building Automation System

When Trane’s changeover VAV System for light commercial applications is coupled with Voyager, it provides the latest in technological advances for comfort management systems and can allow thermostat control in every zone served by VariTrac.



# Application Considerations

Application of this product should be within the cataloged airflow and cooling considerations.

### Barometric Relief

This product line offers an optional barometric relief damper for use in conjunction with economizer option. This accessory consists of gravity dampers which open with increased pressure. As the building air pressure increases, the pressure in the unit return air section also increases, opening the dampers and relieving the conditioned space.

*Notes:*

- *The effectiveness of barometric relief damper during economizing operation is system related.*
- *Pressure drop of the return air system should be considered to control building pressurization.*

### Black Epoxy Coil

The coils are manufactured with a thermoset, vinyl coating that is bonded to the aluminum fin stock prior to the fin stamping process. These coils are an economical option for protection in mildly corrosive environments.

*Note: Not to be used where seacoast applications exist.*

### Clearance Requirements

The recommended clearances identified with unit dimensions should be maintained to ensure adequate serviceability, maximum capacity and peak operating efficiency. Actual clearances which appear inadequate should be reviewed with the local Trane sales personnel.

### Complete Coat™ Microchannel Condenser Coil

The cathodic epoxy type electrodisposition coating is formulated for high edge build to a number of different types of heat exchangers. The coating is selected to provide excellent resistance and durability to corrosive effects of alkalies, acids, alcohols, petroleum, seawater, salty air and other corrosive environments. This coating shall be available on microchannel condenser coils.

### Condensate Trap

The evaporator is a draw-thru configuration. A trap must be field provided prior to start-up on the cooling cycle.

### Heating Operation

The heat exchanger is manufactured with aluminized steel. To prevent condensation within the heat exchanger, do not exceed 50 percent outside air or a minimum mixed air temperature of 40°F.

### Optional Stainless Steel Heat Exchanger

The optional stainless steel heat exchanger is manufactured with 304 stainless steel. To prevent corrosion and prolong heat exchanger reliability, the minimum mixed air temperature allowed across the heat exchanger is 20°F.

### Low Ambient Cooling

The Voyager™ line features, with ReliaTel™ microprocessor controls, low ambient cooling down to 0°F. The following options need to be included/considered when low ambient applications are required: continuous fan operation, crankcase heaters (standard), thermal expansion valves, frostat.

Contact your local Trane Representative for more assistance with low ambient cooling applications.

### Unit Pitch

These units have sloped condensate drain pans. Units must be installed level. Any unit slope must be toward access side of the unit.

# Selection Procedure (SI/IP)

## SI Selection Procedure

### Cooling Capacity

*Note: Cooling Capacity Procedure is the same for cooling (TS*), gas/electric (YS*) and heat pump (WS*) units.*

**Step 1.**

Calculate the building's total and sensible cooling loads at design conditions. Use the Trane calculation methods or any other standard accepted method.

Factors used in unit selection:

- Total Cooling Load: 40.0 kW
- Sensible Cooling Load: 29.0 kW
- Airflow: 8500 $m^3/h$
- Electrical Characteristics:
  380-415/50/3
- Summer Design Conditions:
- Entering Evaporator Coil:
  27°C DB, 22°C WB,
  35°C Outdoor Ambient
- External Static Pressure: 127 Pa
- Rooftop—downflow configuration accessories
  - Roof Curb
  - Economizer
  - Electric Heat

**Step 2.**

Size the equipment using Table 4, p. 30. Match the cooling loads at design conditions.

Table 4, p. 30 shows that a TSD155F has a gross cooling capacity of 47.5 kW and 35.6 kW sensible capacity at 8500 $m^3/h$ and 35°C DB outdoor ambient with 27°C DB, 19°C WB air entering the evaporator.

**To Find Capacity at Intermediate Conditions Not in the Table:**

When the design conditions are between two numbers that are in the capacity table, interpolation is required to approximate the capacity.

*Note: Extrapolation outside of the table conditions is not recommended.*

### Step 3.

In order to select the correct unit which meets the building's requirements, the fan motor heat must be deducted from the gross cooling capacity. The amount of heat that the fan motor generates is dependent on the effort by the motor, airflow and static pressure. To determine the total unit static pressure (see Table 48, p. 56 for Static Pressure Drops Through Accessories):

| | |
|---|---|
| External Static Duct System | 127 Pa |
| Standard Filter 25mm | 19 Pa |
| Economizer (100% OA) | 12 Pa |
| Electric Heater Size 27 kW | 11Pa |
| Total Static Pressure | 169 Pa |

**Notes:**
1. Reference "Heating Capacity" section on this page for determination of heater size.
2. No additional static add for gas/heat exchanger.

*Note: The Evaporator Fan Performance (see Table 20, p. 44) has already accounted for the pressure drop for standard filters and wet coils (see note below Table 20, p. 44). Therefore, the actual total static pressure is 169 - 19 (from Table 48, p. 56) = 150 Pa.*

With 8500 $m^3/h$ and 150 Pa. Table 20, p. 44 shows 1.12 kW for this unit. The formula below can be used to calculate Fan Motor Heat:

Fan Motor Heat = 1.23 * Fan Power (kW)
1.23 * 1.12 kW = 1.3776 kW

Now subtract the fan motor heat from the gross cooling capacity of the unit:

Net Total Cooling Capacity =
47.5 - 1.37 = 46.12

Net Sensible Cooling Capacity =
35.6 - 1.37 = 34.22

### Step 4.

If the performance will not meet the required load of the building, total or sensible cooling load, try a selection at the next higher size unit.

## Heating Capacity

*Note: Heating capacity procedures DIFFER for cooling (TS*), gas/electric (YS*) and heat pump (WS*) units.*

### Step 1.

Calculate the building heating load using the Trane calculation form or other standard accepted method.

### Step 2.

Size the system heating capacity to match the calculated building heating load. The following are building heating requirements:

### TS* cooling units:

- 380 volt/three-phase Power Supply
- Total heating load of 20.5 kW
- Airflow of 8500 $m^3/h$

The electric heat accessory capacities are listed in Table 52, p. 62. From the table, a 26.9 kW heater at 415 volts is selected. In order to determine capacity at 380 volts, the heater voltage correction

factor from Table 53, p. 62 must be used. Therefore, 26.9 kW x 0.84 (voltage correction factor) = 22.59 kW.

### YS* gas/electric:

The fuel used is natural gas with a total heating load of 30 kW. Table 2, p. 26 shows 61.1 kW and 85.5 kW input models. The output capacities of these furnaces are 49.6 kW and 69.4 kW, respectively. The low heat model with 49.6 kW output best matches the building requirements.

### WS* heat pumps:

Total heating load of 30.0 kW. Outdoor ambient (Winter) of -9°C DB and indoor return of 21°C DB and an airflow of 8500 $m^3/h$. The unit is using a 380 V power supply. Use the integrated portion of Table 16, p. 42 for the WC*155 to determine capacity at winter design conditions. The mechanical heating portion of the heat pump will provide 20.9 kW.

### Step 3.

*Note: This step does not apply to TS* and YS* units.*

### WS* heat pumps:

Because 22.1 kW is less than the building's required heating capacity at winter design condition, a supplementary heater must be selected.

30.0 - 20.9 = 9.1 kW

From Table 62, p. 64, a 13.4 kW heater at 415 V is selected. To find the capacity at 380 V, the heater voltage correction factor from Table 63, p. 64 must be used. Therefore, 13.4 kW x 0.84 (voltage correction factor) = 11.26 kW. This heater will be adequate to do the job.

## Air Delivery Selection

*Note: Air Deliver procedures is the same for cooling (TS*), gas/electric (YS*) and heat pump (WS*) units.*

External static pressure drop through the air distribution system has been calculated to be 150 Pa. From Table 48, p. 56, static pressure drop through the economizer is 12 Pa and the 27 kW heater is 12 Pa (127 + 12 + 12). Enter (Table 20, p. 44) for a TSD155F at 8500 $m^3/h$ and 150 Pa static pressure.

The standard motor at 566 rpm will give the desired airflow at a rated kW of 1.12.

# IP Selection Procedure

## Cooling Capacity

*Note: Cooling Capacity Procedure is the same for cooling (TS*), gas/electric (YS*) and heat pump (WS*) units.*

### Step 1.

Calculate the building's total and sensible cooling loads at design conditions. Use the Trane calculation methods or any other standard accepted method.

Factors used in unit selection:

- Total Cooling Load: 140 MBh
- Sensible Cooling Load: 100 MBh
- Airflow: 5000 cfm
- Electrical Characteristics: 380-415/50/3
- Summer Design conditions:
- Entering Evaporator Coil: 80 DB, 73 WB
- Outdoor Ambient: 95 DB
- External Static pressure: 0.50 in. wg
- Rooftop - downflow configuration
- Accessories
  - Roof Curb
  - Economizer
  - Electric Heat

### Step 2.

As a starting point, a rough determination must be made of the size of the unit. The final selection will be made after examining the performance at the given conditions. Divide the total cooling load by nominal Btu/h per ton (12 MBh per ton); then round up to the nearest unit size.

140 MBh / 12 MBh = 11.6 tons

### Step 3.

Table 5, p. 31 shows that a TSD155F has a gross cooling capacity of 162.2 MBh and 121.4 MBh sensible capacity at 5000 cfm and 95 DB outdoor ambient with 80 DB, 73 WB air entering the evaporator.

### To Find Capacity at Intermediate Conditions Not in the Table:

When the design conditions are between two numbers that are in the capacity table, interpolation is required to approximate the capacity.

*Note: Extrapolation outside of the table conditions is not recommended.*

### Step 4.

In order to select the correct unit which meets the building's requirements, the fan motor heat must be deducted from the gross cooling capacity. The amount of heat that the fan motor generates is dependent on the effort by the motor, cfm and static pressure. To determine the total unit static pressure you add the external static pressure to the additional static related by the added features (see Table 49, p. 57 for Static Pressure Drops Through Accessories):

| | |
|---|---|
| External Static Duct System | 0.50 wg |
| Standard Filter 1in. | 0.08 wg |
| Economizer (100% OA) | 0.05 wg |
| Electric Heater Size 27 kW | 0.05 wg |
| Total Static Pressure | 0.68 wg |

**Notes:**
1. Reference "Heating Capacity" section on this page for determination of heater size.
2. No additional static add for gas/heat exchanger.

*Note: The Evaporator Fan Performance Table 21, p. 44 has already accounted for the pressure drop for standard filters and wet coils (see note below Table 21, p. 44). Therefore, the actual total static pressure is 0.68 - 0.08 (from Table 49, p. 57) = 0.60 wg.*

With 5000 cfm and 0.60 wg, Table 21, p. 44 shows 1.50 bhp for this unit. The formula below can be used to calculate Fan Motor Heat:

Fan Motor Heat = 3.15 * Fan bhp
3.15 * 1.50 = 4.725 MBh

Now subtract the fan motor heat from the gross cooling capacity of the unit:

Net Total Cooling Capacity =
162.2 - 4.725 = 157.475 MBh

Net Sensible Cooling Capacity =
121.4 - 4.725 = 116.675 MBh

### Step 5.

If the performance will not meet the required load of the building, total or sensible cooling load, try a selection at the next higher size unit.

## Heating Capacity

*Note: Heating capacity procedures DIFFER for cooling (TS*), gas/electric (YS*) and heat pump (WS*) units.*

### Step 1.

Calculate the building heating load using the Trane calculation form or other standard accepted method.

### Step 2.

Size the system heating capacity to match the calculated building heating load. The following are building heating requirements:

### TS* cooling units:

380 volt/3 phase Power Supply

Total heating load of 75.0 MBh
5000 cfm

The electric heat accessory capacities are listed in Table 52, p. 62. From the table, a 26.9 kW heater will deliver 91.73 MBh at 415 volts. In order to determine capacity at 380 volts, the heater voltage correction factor from Table 53, p. 62 must be used. Therefore, 91.73 MBh x 0.84 (voltage correction factor) = 77.05 MBh.

### YS* gas/electric:

Fuel natural gas and a total heating load of 115 MBh. Table 2, p. 26 shows 208.3 MBh and 291.7 MBh input models. The output capacities of these furnaces are 169.2 MBh and 236.7 MBh respectively. The low heat model with 169.2 MBh output best matches the building requirements.

### WS* heat pumps:

Total heating load of 100 MBh. Outdoor ambient (Winter) of 17 DB and Indoor Return of 70 DB and an airflow of 5000 cfm. The unit is using a 380 V power supply. Use the integrated portion of Table 17, p. 42 for the WC*155 to determine capacity at winter design conditions. The mechanical heating portion of the heat pump will provide 71.2 MBh.

### Step 3.

*Note: This step does not apply to TS* and YS* units.*

### WS* heat pumps:

Because 71.2 MBh is less than the building's required heating capacity at winter design conditions, a supplementary heater must be selected.

100 MBh - 71.2 MBh = 28.8 MBh

From Table 62, p. 64, a 13.4 kW heater at 415 V is selected. To find the capacity at 380 V, the heater voltage correction factor from Table 63, p. 64 must be used. Therefore, 13.4 kW x 0.84 (voltage correction factor) = 11.26 kW. This heater will be adequate to do the job. 38.3 MBh.

## Air Delivery Selection

*Note: Air Delivery procedures is the same for cooling (TS*), gas/electric (YS*) and heat pump (WS*) units.*

External static pressure drop through the air distribution system has been calculated to by 0.60 inches of water. From Table 49, p. 57, static pressure drop through the economizer is 0.05 and the 26.9 kW heater is 0.05 inches of water (0.50 + 0.05 + 0.05). Enter (Table 21, p. 44) for a TSD155 at 5000 cfm and 0.60 static pressure. The standard motor at 566 rpm will give the desired airflow at a rated bhp of 1.50.

# Model Number Descriptions

| T | S | D | 1 | 5 | 5 | F | D | R | 0 | A | A |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

### Digit 1 — Unit Type

T = Packaged Cooling, Electric Heat
Y = Packaged Gas/Electric
W = Packaged Heat Pump, Electric Heat

### Digit 2 — Efficiency

S = Standard

### Digit 3 — Airflow Configuration

D = Downflow
H = Horizontal

### Digit 4, 5, 6 — Nominal Gross Cooling Capacity (MBh)

155 = 15 Tons Standard Efficiency
175 = 17½ Tons Standard Efficiency
200 = 20 Tons Standard Efficiency
250 = 25 Tons Standard Efficiency

### Digit 7 — Major Design Sequence

E = Round Tube Plate Fin Type Condenser Coils
F = Microchannel Type Condenser Coils

### Digit 8 — Voltage Selection

D = 380-415/50/3
T = 200/50/3[11]

### Digit 9 — Unit Controls

R = Reliatel

### Digit 10 — Heating Capacity

*Note: (Applicable to Digit 1 T/W models only)*

0 = No Heat
G = 18 kW Electric Heat
K = 27 kW Electric Heat
N = 36 kW Electric Heat
P = 54 kW Electric Heat
R = 72 kW Electric Heat

*Note: (Applicable to Digit 1 Y models only)*

H = Gas Heat - High
L = Gas Heat - Low
X = Gas Heat - SS Ht Ex - Low
Z = Gas Heat - SS Ht Ex - High

### Digit 11 — Minor Design Sequence

### Digit 12, 13 — Service Sequence

### Digit 14 — Fresh Air Selection

0 = No Fresh Air
A = Manual Damper
B = Motorized Damper
D = Econ Dry Bulb w/ Barometric Relief
F = Econ Reference Enthaply w/ Barometric Relief
H = Econ Comparative Enthaply w/ Barometric Relief

### Digit 15 — Supply Fan/Drive Type/Motor

0 = Standard Motor
1 = Oversized Motor
3 = High Efficiency Motor
6 = Single Zone Variable Air Volume Standard Motor
7 = Multi-Speed Standard Motor
8 = Single Zone Variable Air Volume Oversized Motor
9 = Multi-Speed Oversized Motor
A = Single Zone Variable Air Volume Standard Motor w/ Shaft Ground Ring
B = Multi-Speed Standard Motor w/ Shaft Ground Ring
C = Single Zone Variable Air Volume Oversized Motor w/ Shaft Ground Ring
D = Multi-Speed Oversized Motor w/ Shaft Ground Ring

### Digit 16 — Hinged Service Access / Filters

0 = Standard Panels/Standard Filters
A = Hinged Access/Standard Filters

### Digit 17 — Condenser Coil Protection

0 = Standard Coil
1 = Standard Coil With Hail Guard
2 = Black Epoxy Pre-Coated Coil
3 = Black Epoxy Pre-Coated Coil With Hail guard
4 = CompleteCoat™Condenser Coil
5 = CompleteCoat™Condenser Coil with Hail Guard

### Digit 18 — Through The Base Provisions

0 = No Through The Base Provisions
A = Through The Base Electric
B = Through The Base Gas
C = Through The Base Electric/Gas
D = Through The Base Access

### Digit 19 — Disconnect Switch/ Circuit Breaker

0 = No Disconnect/circuit break
1 = Unit Mounted Non-Fused Disconnect Switch
2 = Unit Mounted Circuit Breaker

### Digit 20 — Convenience Outlet Option

0 = Without Convenience Outlet
A = Unpowered Convenience Outlet
B = Powered Convenience Outlet

### Digit 21 — Communications Options

0 = Without Communications Options

6 = Building Automation Control Network Communications Interface

### Digit 22 — Refrigeration System Option

0 = Standard refrigeration system

### Digit 23 — Refrigeration Controls

0 = Without Refrigeration Controls
1 = Frostat

### Digit 24 — Smoke Detector

0 = Without Smoke Detector
A = Return Air Smoke Detector
B = Supply Air Smoke Detector
C = Return/Supply Air Smoke Detector
D = Plenum Smoke Detector

### Digit 25 — System Monitoring Controls

0 = No Monitoring Controls
1 = Clogged Filter Switch
2 = Fan Failure Switch
3 = Discharge Air Sensing
4 = Clogged Filter Switch and Fan Failure
5 = Clogged Switch and Discharge Air Sensing
6 = Fan Failure Switch and Discharge Air Sensing
7 = Clogged Filter Switch, Fan Failure Switch and Discharge Air Sensing
A = Condensate Drain Pan Overflow Switch
B = Clogged Filter Switch and Condensate Drain Pan Overflow Switch
C = Fan Failure Switch and Condensate Drain Pan Overflow Switch
D = Discharge Air Sensing and Condensate Drain Pan Overflow Switch
E = Clogged Filter Switch, Fan Failure Switch and Condensate Drain Pan Overflow Switch
F = Clogged Filter Switch, Discharge Air Sensing Tube and Condensate Drain Pan Overflow Switch
G = Fan Failure Switch, Discharge Air Sensing Tube and Condensate Drain Pan Overflow Switch
H = Clogged Filter Switch, Fan Failure Switch, Discharge Air Sensing and Condensate Drain Pan Overflow Switch

### Digit 26 - System Monitoring Controls

0 No Monitoring Controls
A Demand Control Ventilation ($CO_2$)[12]

### Digit 27 - Unit Hardware Enhancements

0 No Enhancements
1 Stainless Steel Drain Pan

## Options

### Factory Installed Options*[10]

- Black Epoxy Pre-Coated Coils[4]
- $CO_2$ Sensor Wiring (Wiring Only)
- Complete Coat Microchannel Coil
- Condensate Overflow Switch
- Hinged Access Doors
- MERV 8 or 13 with Filter Removal Tool
- Stainless Steel Drain Pan
- Stainless Steel Heat Exchanger with 10 year warranty[4]
- Through the Base Electrical Access
- Through the Base Electrical with Circuit Breaker[8, 9]
- Through the Base Electrical with Disconnect Switch[5, 8, 9]

### Factory* or Field Installed Options[10]

- Clogged Filter/Fan Failure Switch[2, 4]
- Discharge Air Sensing Kit[2, 4]
- Economizer - Downflow
- Electric Heaters[4, 6, 9]
- Frostat[2, 4]
- LonTalk® Communications Interface (LCI)[4]
- ReliaTel Options Module[7]

### Field Installed Options

- Barometric Relief
- $CO_2$ Sensing
- Digital Display Zone Sensor
- Dual Thermistor Remote Zone Sensor
- Economizer - Horizontal
- High and Low Static Drive Kits
- LP Conversion Kit
- Manual Outside Air Damper
- Motorized Outside Air Dampers
- Oversized Motors
- Reference or Comparative Enthalpy[3, 4]
- Remote Potentiometer
- Roof Curb (Downflow Only)
- Thermostat
- Tool-less Hail Guards
- Trane Communications Interface (TCI)[1, 4]
- Ventilation Override Accessory[2]
- Zone and Remote Zone Sensors

## Model Number Notes

1. TCI is for use with non-VariTrac systems and VariTrac systems.
2. Requires ReliaTel options module.
3. Requires Economizer.
4. Available factory installed on downflow AND horizontal units. Verify with ordering system.
5. Cannot be fused.
6. Must be factory installed when using Through-the-Base Options.
7. ReliaTel Options Module is required when ordering the following accessories (Factory- or Field-Installed Options): Clogged Filter Switch, Fan Fail Switch, Discharge Air Sensing Kit, Frostat, Ventilation Override.
8. Unit mounted disconnect and circuit breakers are mutually exclusive of each other.
9. Through-the-base electrical option or Horizontal Side Access must be ordered with either unit mounted disconnect or circuit breaker. When adding heat, must order Trane Electric Heat.
10. All Factory Installed Options are Built-to-Order. Check order services for estimated production cycle.
11. Available on Heat Pump (W) units only.
12. Demand Control Ventilation Option includes wiring only. The $C0_2$ sensor is a field-installed only option.

*Note: *Some Factory Installed Options (FIOPS) available for Downflow Air Discharge units only. Please verify with ordering system for availability.*

# General Data

**Table 1. TS* general data**

| Model | 15–25 Tons Downflow and Horizontal Units | | | |
|---|---|---|---|---|
| | **TS*155FD** | **TS*175FD** | **TS*200FD** | **TS*250FD** |
| **Cooling Performance[a]** | | | | |
| ARI Gross Capacity kW (MBh) | 44.8 (153) | 51.2 (174.8) | 62.7 (214.1) | 68.3 (233.0) |
| COP/EER[b] | 3.47 / 11.8 | 3.51 / 12.0 | 3.14 / 10.7 | 3.10 / 10.8 |
| Nominal Airflow - $m^3/h$ (cfm) | 7480 (4400) | 9000 (5300) | 10400 (6125) | 12240 (7200) |
| ARI Airflow - $m^3/h$ (cfm) | 44.0 (150) | 49.8 (170.0) | 61.0 (208.2) | 66.0 (225.3) |
| ARI Net Capacity - kW (MBh) | 13 | 14.6 | 20.0 | 21.6 |
| System Power - kW | 12.9 | 14.5 | 19.6 | 21.0 |
| **Compressor** | | | | |
| No./Type | 2/Scroll | 2/Scroll | 2/Scroll | 2/Scroll |
| **Sound Rating dB[c]** | 9.0 | 9.2 | 9.2 | 9.2 |
| **Outdoor Coil - Type** | Microchannel | Microchannel | Microchannel | Microchannel |
| Coil Width mm (in.) | 25.4 (1) | 25.4 (1) | 25.4 (1) | 25.4 (1) |
| Face Area - $m^2$ (sq. ft.) | 3.27 (35.2) | 3.27 (35.2) | 3.27 (35.2) | 3.27 (35.2) |
| Rows/Fins per inch | 1 / 20 | 1 / 20 | 1 / 20 | 1 / 20 |
| **Indoor Coil - Type** | Hi-Performance | Hi-Performance | Hi-Performance | Hi-Performance |
| Tube Size OD - in. | 0.3125 | 0.3125 | 0.3125 | 0.3125 |
| Face Area - $m^2$ (sq. ft.) | (2.42) 26 | (2.42) 26 | (2.42) 26 | (2.42) 26 |
| Rows/Fins per inch | 3/ 15 | 4 / 15 | 4 / 15 | 4 / 15 |
| Refrigerant Control | Short Orifice | Short Orifice | Short Orifice | Short Orifice |
| Drain Connection No./Size - in. | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT | 1/1.00 NPT |
| **Outdoor Fan - Type** | Propeller | Propeller | Propeller | Propeller |
| No. Used/Diameter - mm (in.) | 2 / 660 (26) | 2 / 660 (26) | 2 / 660 (26) | 2 / 710(28) |
| Drive Type/No. Speeds | Direct / 1 | Direct / 1 | Direct / 1 | Direct / 1 |
| Airflow - $m^3/h$ (cfm) | 15630 (9200) | 18860 (11100) | 18000 (10600) | 19880 (11700) |
| No. Motors/Power - W (HP) | 2 / 250(0.33) | 2 / 560(0.75) | 2 / 560(0.75) | 2 / 560(0.75) |
| Motor RPM | 925 | 950 | 950 | 950 |
| **Indoor Fan - Type** | FC Centrifugal | FC Centrifugal | FC Centrifugal | FC Centrifugal |
| No. Used | 1 | 1 | 1 | 1 |
| Diameter x Width - mm (in.) | 457x457 (18x18) | 457x457 (18x18) | 457x457 (18x18) | 457x457 (18x18) |
| Drive Type/No. Speeds | Belt / 1 | Belt / 1 | Belt / 1 | Belt / 1 |
| No. Motors | 1 | 1 | 1 | 1 |
| Standard/Oversized Motor Power — W (HP) | 1500(2.0) / 2200(3.0) | 2200(3.0) / 3700(5.0) | 2200(3.0) / 3700(5.0) | 3700(5.0) / N/A |
| Motor RPM - Standard/Oversized | 1450 / 2850 | 2850 / 2920 | 2850 / 2920 | 2920/N/A |

**Table 1. TS* general data (continued)**

| Model | 15–25 Tons Downflow and Horizontal Units | | | |
|---|---|---|---|---|
| | **TS*155FD** | **TS*175FD** | **TS*200FD** | **TS*250FD** |
| **Filters—Type / Furnished** | | | | |
| Type Furnished | Throwaway | Throwaway | Throwaway | Throwaway |
| Number Size Recommended | | | | |
| Downflow—mm | (4)508x508x50<br>(4)508x635x50 | (4)508x508x50<br>(4)508x635x50 | (4)508x508x50<br>(4)508x635x50 | (4)508x508x50<br>(4)508x635x50 |
| Downflow—in | (4)20x20x2 (4)20x25x2 | (4)20x20x2 (4)20x25x2 | (4)20x20x2 (4)20x25x2 | (4)20x20x2 (4)20x25x2 |
| Horizontal—mm | (8)508x635x50 | (8)508x635x50 | (8)508x635x50 | (8)508x635x50 |
| Horizontal—in | (8)20x25x2 | (8)20x25x2 | (8)20x25x2 | (8)20x25x2 |
| **Refrigerant Charge**<br>R-410A kg (lb)(d) | 5.2/2.7 (11.4/6) | 6.5/3.4 (14.4/7.6) | 6.1/3.2 (13.5/7) | 4.8/4.8 (10.5/10.5) |

(a) Cooling Performance is rated at 35°C (95°F) ambient, 26.7°C (80°F) entering dry bulb, 19.4°C (67°F) entering wet bulb. Gross capacity does not include the effect of fan motor heat. ARI capacity is net and includes the effect of fan motor heat. Units are suitable for operation ±20% of nominal airflow. Ratings shown are tested and certified in accordance with ARI Standard 210/240 or 340/360 certification program.
(b) EER is rated at ARI conditions and in accordance with DOE test procedures.
(c) Sound Ratings shown are tested in accordance with ARI Standard 270 or 370.
(d) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

**Table 2. YS* general data**

| Model | 15–25 Tons Downflow and Horizontal Units | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | YS*155FD | | YS*175FD | | YS*200FD | | YS*250FD | |
| **Cooling Performance[a]** | | | | | | | | |
| ARI Gross Capacity—kw (MBh)) | 44.8 (153) | | 51.2 (174.8) | | 62.7 (214.1) | | 68.3 (233.0) | |
| COP/EER[b] | 3.47 / 11.8 | | 3.51 / 12.0 | | 3.14 / 10.7 | | 3.10 / 10.8 | |
| Nominal Airflow—$m^3$/h (cfm) | 7480 (4400) | | 5300 | | 6125 | | 7175 | |
| ARI Airflow—$m^3$/h (cfm) | 44.0 (150) | | 49.8 (170.0) | | 61.0 (208.2) | | 66.0 (225.3) | |
| System Power—kW | 13 | | 14.6 | | 20.0 | | 21.6 | |
| **Heating Performance[c]** | | | | | | | | |
| Heating Models | Low | High | Low | High | Low | High | Low | High |
| Heating Input—(MBh) | 61.1(208.3) | 85.5(291.7) | 61.1(208.3) | 85.5(291.7) | 61.1(208.3) | 97.7(333.3) | 61.1(208.3) | 97.7(333.3) |
| 1st Stage (2 Stage Only)—(MBh) | 42.7(145.8) | 61.1(208.3) | 42.7(145.8) | 61.1(208.3) | 42.7(145.8) | 73.3(250.0) | 42.7(145.8) | 73.3(250.0) |
| Heating Output—(MBh) | 49.6(169.2) | 69.4(236.7) | 49.6(169.2) | 69.4(236.7) | 49.6(169.2) | 79.1(270.0) | 49.6(169.2) | 79.1(270.0) |
| 1st Stage (2 Stage Only)—(MBh) | 34.7(118.3) | 49.6(169.2) | 34.7(118.3) | 49.6(169.2) | 34.7(118.3) | 59.3(202.5) | 34.7(118.3) | 59.3(202.5) |
| Steady State Efficiency % | 23.7(81.0) | 23.7(81.0) | 23.7(81.0) | 23.7(81.0) | 23.7(81.0) | 23.7(81.0) | 23.7(81.0) | 23.7(81.0) |
| **Numbers of Gas Heat Stages** | | | | | | | | |
| Number of Gas Burners | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Gas Connection Pipe Size—in. | 1/2 | 3/4 | 1/2 | 3/4 | 1/2 | 3/4 | 1/2 | 3/4 |
| **Compressor** | | | | | | | | |
| Number/Type | 2/Scroll | | 2/Scroll | | 2/Scroll | | 2/Scroll | |
| **Sound Rating dB[d]** | 9.0 | | 9.2 | | 9.2 | | 9.2 | |
| **Outdoor Coil** | | | | | | | | |
| Type | Microchannel | | Microchannel | | Microchannel | | Microchannel | |
| Coil Width—mm (in.) | 25.4 (1) | | 25.4 (1) | | 25.4 (1) | | 25.4 (1) | |
| Face Area—$m^3$ (sq. ft.) | 3.27 (35.2) | | 3.27 (35.2) | | 3.27 (35.2) | | 3.27 (35.2) | |
| Rows / Fins per inch | 1 / 20 | | 1 / 20 | | 1 / 20 | | 1 / 20 | |
| **Indoor Coil** | | | | | | | | |
| Type | Hi-Performance | | Hi-Performance | | Hi-Performance | | Hi-Performance | |
| Tube Size (in.) ID | 0.3125 | | 0.3125 | | 0.3125 | | 0.3125 | |
| Face Area—$m^3$ (sq. ft.) | (2.42) 26 | | (2.42) 26 | | (2.42) 26 | | (2.42) 26 | |
| Rows/Fins per inch | 3/15 | | 4/15 | | 4/15 | | 4/15 | |
| Refrigerant Control | Short Orifice | | Short Orifice | | Short Orifice | | Short Orifice | |
| Drain Connection Number/ Size—in. | 1/1.00 NPT | | 1/1.00 NPT | | 1/1.00 NPT | | 1/1.00 NPT | |
| **Outdoor Fan** | | | | | | | | |
| Type | Propeller | | Propeller | | Propeller | | Propeller | |
| Number Used/Diameter—mm (in.) | 2/660 (26) | | 2/660 (26) | | 2/660 (26) | | 2/710 (28) | |
| Drive Type/No. Speeds | Direct/1 | | Direct/1 | | Direct/1 | | Direct/1 | |
| Airflow—$m^3$/h (CFM) | 15630 (9200) | | 18860 (11100) | | 18000 (10600) | | 19880 (11700) | |
| Number Motors/W (HP) | 2/250(0.33) | | 2/560(0.75) | | 2/560(0.75) | | 2/560(0.75) | |
| Motor RPM | 925 | | 950 | | 950 | | 950 | |

**Table 2. YS* general data (continued)**

| Model | 15–25 Tons Downflow and Horizontal Units | | | |
|---|---|---|---|---|
| | **YS*155FD** | **YS*175FD** | **YS*200FD** | **YS*250FD** |
| **Indoor Fan** | | | | |
| Type | FC Centrifugal | FC Centrifugal | FC Centrifugal | FC Centrifugal |
| Number Used | 1 | 1 | 1 | 1 |
| Diameter x Width—mm (in.) | 457x457 (18x18) | 457x457 (18x18) | 457x457 (18x18) | 457x457 (18x18) |
| Drive Type/No. Speeds | Belt / 1 | Belt / 1 | Belt / 1 | Belt / 1 |
| Number Motors | 1 | 1 | 1 | 1 |
| Motor W (HP) (Standard/Oversized) | 1500 (2.0) / 2200 (3.0) | 2200 (3.0) / 3700 (5.0) | 2200 (3.0) / 3700 (5.0) | 3700 (5.0) / N/A |
| Motor RPM (Standard/Oversized) | 1450 / 2850 | 2850 / 2920 | 2850 / 2920 | 2920/N/A |
| **Filters** | | | | |
| Type Furnished | Throwaway | Throwaway | Throwaway | Throwaway |
| Number Size Recommended | | | | |
| Downflow—mm | (4)508x508x50<br>(4)508x635x50 | (4)508x508x50<br>(4)508x635x50 | (4)508x508x50<br>(4)508x635x50 | (4)508x508x50<br>(4)508x635x50 |
| Downflow—in. | (4)20x20x2 (4)20x25x2 | (4)20x20x2 (4)20x25x2 | (4)20x20x2 (4)20x25x2 | (4)20x20x2 (4)20x25x2 |
| Horizontal—mm | (8)508x635x50 | (8)508x635x50 | (8)508x635x50 | (8)508x635x50 |
| Horizontal—in. | (8)20x25x2 | (8)20x25x2 | (8)20x25x2 | (8)20x25x2 |
| **Refrigerant Charge** | | | | |
| R-410A kg (lb)[e] | 5.2/2.7 (11.4/6) | 6.5/3.4 (14.4/7.6) | 6.1/3.2 (13.5/7) | 4.8/4.8 (10.5/10.5) |

(a) Cooling Performance is rated at 35°C (95°F) ambient, 26.7°C (80°F) entering dry bulb, 19.4°C (67°F) entering wet bulb. Gross capacity does not include the effect of fan motor heat. ARI capacity is net and includes the effect of fan motor heat. Units are suitable for operation ±20% of nominal airflow. Ratings shown are tested and certified in accordance with ARI Standard 210/240 or 340/360 certification program.
(b) EER is rated at ARI conditions and in accordance with DOE test procedures.
(c) Heating performance unit settings and data were established under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 610 meters (2000 ft.). For elevations above 610 meters (2000 ft.), ratings should be reduced at the rate of 4% for each 305 meters (1000 ft.) above sea level.
(d) Sound Rating shown is tested in accordance with ARI Standard 270 or 370.
(e) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

**Table 3. WS* general data**

| Model | 15–20 Tons Downflow and Horizontal Units | |
|---|---|---|
| | **WS*155ED, ET** | **WS*200ED, ET** |
| **Cooling Performance[a]** | | |
| ARI Gross Capacity—kW (MBh) | 44.1 (150.7) | 62.9 (214.8) |
| COP/EER[b] | 3.3 (11.3) | 2.9 (9.9) |
| Nominal Airflow—$m^3$/h (cfm) | 8500 (5000) | (11890) 7000 |
| ARI Airflow—$m^3$/h (cfm) | 8500 (5000) | (11890) 7000 |
| ARI Net Capacity—kW (MBh) | 43.2 (147.5) | 61.0 (208.5) |
| System Power—kW | 13.1 | 21.0 |
| **Heating Performance[a]** | | |
| High Temperature Capacity—kW (MBh) | 41.8 (142.7) | 61.4 (209.6) |
| COP | 3.8 | 3.6 |
| System Power—kW | 11.0 | 17.2 |
| **Compressor** | | |
| Number/Type | 2 / Scrolls | 2 / Scrolls |
| **Sound Rating dB[c]** | 9.0 | 9.2 |
| **Outdoor Coil** | | |
| Type | Hi-Performance | Hi-Performance |
| Refrigerant Control | Expansion Valve | Expansion Valve |
| Tube Size (in.) OD | 0.3125 | 0.3125 |
| Face Area-$m^3$ (sq. ft.) | 3.3 (35.2) | 4.0 (42.53) |
| Rows / Fins per inch | 3 / 16 | 3 / 16 |
| **Indoor Coil** | | |
| Type | Hi-Performance | Hi-Performance |
| Tube Size (in.) ID | 0.3125 | 0.3125 |
| Face Area-$m^3$ (sq. ft.) | 2.4 (26) | 2.9 (31.42) |
| Rows / Fins per inch | 4 / 15 | 4 / 15 |
| Refrigerant Control | Short Orifice | Short Orifice |
| Drain Connection Number/Size (in.) | 1/1.00 NPT | 1/1.00 NPT |
| **Outdoor Fan** | | |
| Type | Propeller | Propeller |
| Number Used/Diameter—mm (in.) | 2 / 660 (26) | 2 / 710(28) |
| Drive Type/No. Speeds | Direct / 1 | Direct / 1 |
| Airflow—$m^3$/h (CFM) | 15300 (9000) | 20900 (12300) |
| Number Motors/W (HP) | 2 / 250 (0.33) | 2 / 560 (0.75) |
| Motor RPM | 925 | 950 |

**Table 3. WS* general data (continued)**

| Model | 15–20 Tons Downflow and Horizontal Units | |
|---|---|---|
| | **WS*155ED, ET** | **WS*200ED, ET** |
| **Indoor Fan** | | |
| Type | FC Centrifugal | FC Centrifugal |
| Number Used | 1 | 1 |
| Diameter x Width—mm (in.) | 457x457 (18x18) | 457x457 (18x18) |
| Drive Type/No. Speeds | Belt / 1 | Belt / 1 |
| Number Motors | 1 | 1 |
| Motor W (HP) (Standard/Oversized) | 1500 (2.0) / 2200 (3.0) | 2200 (3.0) / 3700 (5.0) |
| Motor RPM (Standard/Oversized) | 1450 / 2850 | 2850 / 2920 |
| **Filters** | | |
| Type Furnished | Throwaway | Throwaway |
| Number Size Recommended | | |
| Downflow—mm | (4)508x508x50 | (8)20x20x2 (4)20x16x2 |
| Downflow | (4)508x635x50 | (8)508x508x50 |
| Downflow—in | (4)20x20x2 (4)20x25x2 | (4)508x406x50 |
| Horizontal—mm | (8)508x635x50 | (12)508x508x50 |
| Horizontal—in | (8)20x25x2 | (12)20x20x2 |
| **Refrigerant Charge** | | |
| R-410A kg (lb)[(d)] | 6.6 / 6.4 (14.5 / 14.2) | 9.0 / 8.2 (19.75 / 18) |

(a) Cooling Performance is rated at 35°C (95°F) ambient, 26.7°C (80°F) entering dry bulb, 19.4°C (67°F) entering wet bulb. Heating Performance is rated at 20°C (68°F) ambient, 8.3°C (47°F) entering dry bulb, 6.1°C (43°F) entering wet bulb. Gross capacity does not include the effect of fan motor heat. ARI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal airflow. Rated in accordance with ARI Standard 210/240 or 340/360.
(b) EER is rated at ARI conditions and in accordance with DOE test procedures.
(c) Sound Rating shown is tested in accordance with ARI Standard 270 or 370.
(d) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

# Performance Data

**Table 4. Gross cooling capacities T/YS*155FD (SI)**

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 30 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | | 35 — 16 | | 19 | | 22 | | 40 — 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 7140 | 24 | 42.3 | 34.8 | 46.1 | 25.1 | 51.3 | 17.9 | 38.7 | 32.6 | 42.6 | 23.7 | 47.7 | 16.7 | 34.7 | 30.2 | 38.6 | 22.0 | 43.8 | 15.3 |
| | 27 | 44.2 | 41.1 | 47.1 | 33.6 | 51.3 | 20.4 | 41.0 | 38.8 | 43.9 | 32.1 | 48.1 | 19.6 | 37.4 | 36.3 | 40.3 | 30.2 | 44.5 | 18.5 |
| | 30 | 46.3 | 46.3 | 48.2 | 41.0 | 51.4 | 29.9 | 43.4 | 43.4 | 45.4 | 39.3 | 48.6 | 28.9 | 40.1 | 40.1 | 42.1 | 37.3 | 45.3 | 27.7 |
| | 33 | 48.5 | 48.5 | 49.4 | 47.2 | 51.7 | 38.3 | 45.9 | 45.9 | 46.9 | 45.4 | 49.2 | 37.2 | 43.0 | 43.0 | 44.0 | 43.3 | 46.3 | 35.8 |
| 7820 | 24 | 43.5 | 36.1 | 47.0 | 26.4 | 51.9 | 18.2 | 39.9 | 34.0 | 43.5 | 25.0 | 48.4 | 16.9 | 35.9 | 31.6 | 39.6 | 23.3 | 44.5 | 15.6 |
| | 27 | 45.5 | 42.6 | 48.1 | 35.0 | 52.0 | 21.7 | 42.3 | 40.3 | 44.9 | 33.5 | 48.9 | 20.9 | 38.7 | 37.8 | 41.3 | 31.6 | 45.3 | 19.8 |
| | 30 | 47.7 | 47.7 | 49.3 | 42.4 | 52.2 | 31.3 | 44.8 | 44.8 | 46.5 | 40.8 | 49.4 | 30.3 | 41.5 | 41.5 | 43.2 | 38.8 | 46.2 | 29.1 |
| | 33 | 49.9 | 49.9 | 50.6 | 48.7 | 52.6 | 39.7 | 47.4 | 47.4 | 48.1 | 46.9 | 50.1 | 38.6 | 44.7 | 44.5 | 45.2 | 44.8 | 47.2 | 37.2 |
| 8500 | 24 | 44.5 | 37.4 | 47.8 | 27.6 | 52.4 | 18.3 | 41.0 | 35.3 | 44.3 | 26.2 | 48.9 | 17.1 | 37.0 | 32.9 | 40.4 | 24.5 | 45.0 | 15.8 |
| | 27 | 46.6 | 43.9 | 49.0 | 36.3 | 52.6 | 22.9 | 43.4 | 41.7 | 45.8 | 34.7 | 49.4 | 22.1 | 39.8 | 39.1 | 42.2 | 32.9 | 45.9 | 21.0 |
| | 30 | 48.9 | 48.9 | 50.2 | 43.8 | 52.9 | 32.5 | 46.0 | 46.0 | 47.4 | 42.1 | 50.1 | 31.6 | 42.7 | 42.7 | 44.2 | 40.1 | 46.9 | 30.3 |
| | 33 | 51.2 | 51.2 | 51.6 | 50.1 | 53.3 | 41.0 | 48.7 | 48.7 | 49.1 | 48.3 | 50.8 | 40.0 | 46.2 | 46.2 | 46.2 | 46.2 | 48.0 | 38.6 |
| 9180 | 24 | 45.4 | 38.6 | 48.4 | 28.7 | 52.7 | 18.4 | 41.8 | 36.4 | 44.9 | 27.3 | 49.2 | 17.2 | 37.9 | 34.0 | 41.0 | 25.6 | 45.4 | 15.9 |
| | 27 | 47.6 | 45.2 | 49.7 | 37.4 | 53.0 | 24.0 | 44.4 | 42.9 | 46.5 | 35.9 | 49.9 | 23.1 | 40.8 | 40.4 | 42.9 | 34.1 | 46.3 | 22.0 |
| | 30 | 49.9 | 49.9 | 51.0 | 45.0 | 53.4 | 33.7 | 47.1 | 47.1 | 48.2 | 43.4 | 50.6 | 32.7 | 43.8 | 43.8 | 45.0 | 41.4 | 47.4 | 31.5 |
| | 33 | 52.3 | 52.3 | 52.4 | 51.5 | 53.9 | 42.3 | 49.5 | 49.5 | 50.0 | 49.7 | 51.4 | 41.2 | 47.1 | 47.1 | 47.1 | 47.1 | 48.6 | 39.8 |

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 45 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | | 49 — 16 | | 19 | | 22 | | 52 — 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 7140 | 24 | 30.3 | 27.5 | 34.3 | 20.0 | 39.5 | 13.8 | 28.0 | 26.0 | 31.9 | 18.9 | 37.1 | 13.0 | 25.5 | 24.5 | 29.5 | 17.7 | 34.7 | 12.1 |
| | 27 | 33.3 | 33.3 | 36.3 | 28.1 | 40.5 | 17.1 | 31.1 | 31.1 | 34.1 | 26.9 | 38.4 | 16.2 | 28.9 | 28.9 | 31.8 | 25.7 | 36.1 | 15.3 |
| | 30 | 36.4 | 36.4 | 38.4 | 35.1 | 41.7 | 26.1 | 34.4 | 34.4 | 36.4 | 33.8 | 39.7 | 25.3 | 32.3 | 32.3 | 34.3 | 32.5 | 37.6 | 24.3 |
| | 33 | 40.6 | 40.6 | 40.6 | 40.6 | 43.0 | 34.1 | 38.8 | 38.8 | 38.8 | 38.8 | 41.1 | 33.1 | 36.9 | 36.9 | 36.9 | 36.9 | 39.2 | 32.1 |
| 7820 | 24 | 31.6 | 28.9 | 35.2 | 21.3 | 40.2 | 14.1 | 29.2 | 27.4 | 32.9 | 20.2 | 37.8 | 13.2 | 26.8 | 25.9 | 30.5 | 19.0 | 35.4 | 12.4 |
| | 27 | 34.6 | 34.6 | 37.3 | 29.5 | 41.3 | 18.4 | 32.5 | 32.5 | 35.2 | 28.3 | 39.2 | 17.5 | 30.2 | 30.2 | 32.9 | 27.1 | 36.9 | 16.6 |
| | 30 | 37.8 | 37.8 | 39.6 | 36.5 | 42.6 | 27.5 | 35.8 | 35.8 | 37.6 | 35.3 | 40.6 | 26.6 | 33.7 | 33.7 | 35.5 | 34.0 | 38.5 | 25.7 |
| | 33 | 41.9 | 41.9 | 41.9 | 41.9 | 43.9 | 35.5 | 40.0 | 40.0 | 40.0 | 40.0 | 42.1 | 34.6 | 38.1 | 38.1 | 38.1 | 38.1 | 40.2 | 33.6 |
| 8500 | 24 | 32.6 | 30.2 | 36.0 | 22.5 | 40.7 | 14.2 | 30.3 | 28.7 | 33.7 | 21.4 | 38.4 | 13.4 | 27.9 | 27.2 | 31.3 | 20.2 | 36.0 | 12.6 |
| | 27 | 35.8 | 35.8 | 38.2 | 30.8 | 41.9 | 19.6 | 33.6 | 33.6 | 36.1 | 29.6 | 39.8 | 18.7 | 31.4 | 31.4 | 33.8 | 28.4 | 37.5 | 17.8 |
| | 30 | 39.1 | 39.1 | 40.5 | 37.9 | 43.3 | 28.8 | 37.1 | 37.1 | 38.5 | 36.7 | 41.3 | 27.9 | 35.0 | 35.0 | 36.5 | 35.3 | 39.2 | 27.0 |
| | 33 | 42.9 | 42.9 | 42.9 | 42.9 | 44.7 | 36.9 | 41.1 | 41.1 | 41.1 | 41.1 | 42.9 | 36.0 | 39.2 | 39.2 | 39.2 | 39.2 | 41.0 | 34.9 |
| 9180 | 24 | 33.6 | 31.3 | 36.7 | 23.6 | 41.1 | 14.4 | 31.2 | 29.9 | 34.4 | 22.5 | 38.8 | 13.6 | 28.8 | 28.3 | 31.9 | 21.3 | 36.4 | 12.7 |
| | 27 | 36.8 | 36.8 | 39.0 | 32.0 | 42.4 | 20.6 | 34.7 | 34.7 | 36.8 | 30.8 | 40.3 | 19.8 | 32.4 | 32.4 | 34.6 | 29.5 | 38.0 | 18.9 |
| | 30 | 40.2 | 40.2 | 41.3 | 39.2 | 43.8 | 30.0 | 38.2 | 38.2 | 39.4 | 37.9 | 41.8 | 29.1 | 36.1 | 36.1 | 37.3 | 36.6 | 39.8 | 28.2 |
| | 33 | 43.8 | 43.8 | 43.8 | 43.8 | 45.3 | 38.2 | 42.0 | 42.0 | 42.0 | 42.0 | 43.5 | 37.2 | 40.1 | 40.1 | 40.1 | 40.1 | 41.6 | 36.2 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 5. Gross cooling capacities T/YS*155FD (IP)**

| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 85 | | | | | | 95 | | | | | | 105 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 4200 | 75 | 144.2 | 118.6 | 157.4 | 85.8 | 174.9 | 61.2 | 132.1 | 111.3 | 145.3 | 81.0 | 162.9 | 57.0 | 118.5 | 103.0 | 131.8 | 75.1 | 149.4 | 52.3 |
| | 80 | 151.0 | 140.2 | 160.8 | 114.7 | 175.0 | 69.7 | 139.9 | 132.5 | 149.9 | 109.5 | 164.2 | 66.9 | 127.5 | 123.8 | 137.5 | 103.2 | 151.9 | 63.0 |
| | 85 | 158.0 | 158.0 | 164.5 | 139.8 | 175.4 | 102.1 | 148.2 | 148.2 | 154.8 | 134.1 | 165.8 | 98.8 | 136.9 | 136.9 | 143.6 | 127.3 | 154.7 | 94.5 |
| | 90 | 165.4 | 165.4 | 168.6 | 161.0 | 176.2 | 130.5 | 156.7 | 156.7 | 160.1 | 154.8 | 167.8 | 126.8 | 146.6 | 146.6 | 150.1 | 147.6 | 157.9 | 122.0 |
| 4600 | 75 | 148.3 | 123.2 | 160.5 | 90.2 | 177.1 | 62.0 | 136.2 | 116.0 | 148.5 | 85.4 | 165.1 | 57.8 | 122.6 | 107.8 | 135.0 | 79.6 | 151.8 | 53.1 |
| | 80 | 155.3 | 145.2 | 164.2 | 119.4 | 177.5 | 74.1 | 144.3 | 137.5 | 153.4 | 114.1 | 166.7 | 71.3 | 132.0 | 128.8 | 141.1 | 107.9 | 154.5 | 67.4 |
| | 85 | 162.6 | 162.6 | 168.2 | 144.7 | 178.2 | 106.7 | 152.8 | 152.8 | 158.6 | 139.0 | 168.6 | 103.4 | 141.6 | 141.6 | 147.5 | 132.3 | 157.6 | 99.2 |
| | 90 | 170.3 | 170.3 | 172.6 | 166.2 | 179.3 | 135.4 | 161.7 | 161.7 | 164.1 | 160.0 | 170.9 | 131.7 | 152.6 | 151.7 | 154.2 | 152.9 | 161.0 | 127.0 |
| 5000 | 75 | 151.8 | 127.6 | 163.1 | 94.2 | 178.7 | 62.6 | 139.8 | 120.4 | 151.1 | 89.4 | 166.8 | 58.4 | 126.3 | 112.1 | 137.7 | 83.6 | 153.5 | 53.7 |
| | 80 | 159.1 | 149.8 | 167.1 | 123.7 | 179.4 | 78.1 | 148.2 | 142.1 | 156.3 | 118.5 | 168.7 | 75.3 | 135.9 | 133.5 | 144.1 | 112.2 | 156.6 | 71.5 |
| | 85 | 166.7 | 166.7 | 171.4 | 149.3 | 180.4 | 111.0 | 157.0 | 157.0 | 161.8 | 143.7 | 170.9 | 107.8 | 145.8 | 145.8 | 150.7 | 137.0 | 159.9 | 103.5 |
| | 90 | 174.6 | 174.6 | 176.0 | 171.1 | 181.8 | 140.0 | 166.1 | 166.1 | 167.6 | 165.0 | 173.4 | 136.3 | 157.7 | 157.7 | 157.7 | 157.7 | 163.7 | 131.6 |
| 5400 | 75 | 154.8 | 131.5 | 165.1 | 97.9 | 179.8 | 62.9 | 142.8 | 124.3 | 153.2 | 93.1 | 168.0 | 58.8 | 129.4 | 116.1 | 139.9 | 87.3 | 154.8 | 54.2 |
| | 80 | 162.3 | 154.1 | 169.4 | 127.7 | 180.8 | 81.7 | 151.5 | 146.4 | 158.7 | 122.5 | 170.2 | 79.0 | 139.3 | 137.8 | 146.5 | 116.2 | 158.1 | 75.2 |
| | 85 | 170.2 | 170.2 | 174.0 | 153.6 | 182.1 | 115.0 | 160.6 | 160.6 | 164.4 | 147.9 | 172.6 | 111.7 | 149.5 | 149.5 | 153.4 | 141.3 | 161.7 | 107.5 |
| | 90 | 178.4 | 178.4 | 178.9 | 175.6 | 183.8 | 144.3 | 168.8 | 168.8 | 170.5 | 169.5 | 175.4 | 140.6 | 160.7 | 160.7 | 160.7 | 160.7 | 165.7 | 135.9 |
| 5800 | 75 | 157.2 | 135.2 | 166.6 | 101.2 | 180.4 | 63.1 | 145.2 | 128.0 | 154.8 | 96.4 | 168.6 | 59.0 | 131.9 | 119.8 | 141.5 | 90.7 | 155.4 | 54.4 |
| | 80 | 165.0 | 158.0 | 171.2 | 131.3 | 181.7 | 85.1 | 154.3 | 150.3 | 160.5 | 126.1 | 171.1 | 82.3 | 142.1 | 141.7 | 148.4 | 119.9 | 159.0 | 78.6 |
| | 85 | 173.2 | 173.2 | 176.0 | 157.5 | 183.2 | 118.5 | 163.6 | 163.6 | 166.5 | 151.8 | 173.8 | 115.3 | 152.6 | 152.6 | 155.6 | 145.2 | 163.0 | 111.1 |
| | 90 | 179.5 | 179.5 | 181.3 | 179.8 | 185.2 | 148.2 | 172.9 | 172.9 | 172.9 | 172.9 | 176.9 | 144.5 | 163.2 | 163.2 | 163.2 | 163.2 | 167.3 | 139.8 |

| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 115 | | | | | | 120 | | | | | | 125 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 4200 | 75 | 103.5 | 93.8 | 116.9 | 68.3 | 134.6 | 47.1 | 95.4 | 88.8 | 108.9 | 64.5 | 126.7 | 44.3 | 87.0 | 83.5 | 100.5 | 60.5 | 118.4 | 41.4 |
| | 80 | 113.7 | 113.7 | 123.8 | 95.9 | 138.3 | 58.2 | 106.2 | 106.2 | 116.4 | 91.9 | 130.9 | 55.4 | 98.4 | 98.4 | 108.6 | 87.6 | 123.2 | 52.3 |
| | 85 | 124.2 | 124.2 | 131.1 | 119.6 | 142.2 | 89.2 | 117.4 | 117.4 | 124.3 | 115.4 | 135.5 | 86.2 | 110.2 | 110.2 | 117.1 | 110.9 | 128.3 | 82.9 |
| | 90 | 138.7 | 138.7 | 138.7 | 138.7 | 146.5 | 116.3 | 132.4 | 132.4 | 132.4 | 132.4 | 140.4 | 113.0 | 125.9 | 125.9 | 125.9 | 125.9 | 133.8 | 109.5 |
| 4600 | 75 | 107.7 | 98.5 | 120.2 | 72.7 | 137.0 | 47.9 | 99.7 | 93.5 | 112.2 | 69.0 | 129.1 | 45.2 | 91.3 | 88.3 | 103.9 | 64.9 | 120.8 | 42.3 |
| | 80 | 118.2 | 118.2 | 127.4 | 100.6 | 140.9 | 62.6 | 110.8 | 110.8 | 120.0 | 96.6 | 133.6 | 59.8 | 103.0 | 103.0 | 112.3 | 92.4 | 125.9 | 56.8 |
| | 85 | 129.1 | 129.1 | 134.9 | 124.6 | 145.2 | 93.9 | 122.2 | 122.2 | 128.2 | 120.4 | 138.4 | 90.9 | 115.0 | 115.0 | 121.0 | 115.9 | 131.4 | 87.6 |
| | 90 | 142.8 | 142.8 | 142.8 | 142.8 | 149.8 | 121.3 | 136.6 | 136.6 | 136.6 | 136.6 | 143.6 | 118.0 | 130.1 | 130.1 | 130.1 | 130.1 | 137.1 | 114.6 |
| 5000 | 75 | 111.4 | 102.9 | 122.9 | 76.8 | 138.8 | 48.6 | 103.4 | 97.9 | 115.0 | 73.1 | 130.9 | 45.8 | 95.1 | 92.7 | 106.7 | 69.0 | 122.7 | 42.9 |
| | 80 | 122.2 | 122.2 | 130.4 | 105.0 | 143.0 | 66.7 | 114.8 | 114.8 | 123.1 | 101.0 | 135.7 | 63.9 | 107.1 | 107.1 | 115.4 | 96.8 | 128.1 | 60.9 |
| | 85 | 133.3 | 133.3 | 138.3 | 129.3 | 147.6 | 98.3 | 126.5 | 126.5 | 131.5 | 125.1 | 140.9 | 95.3 | 119.4 | 119.4 | 124.4 | 120.6 | 133.8 | 92.0 |
| | 90 | 146.4 | 146.4 | 146.4 | 146.4 | 152.5 | 125.9 | 140.3 | 140.3 | 140.3 | 140.3 | 146.3 | 122.7 | 133.8 | 133.8 | 133.8 | 133.8 | 139.9 | 119.2 |
| 5400 | 75 | 114.5 | 106.9 | 125.1 | 80.6 | 140.1 | 49.0 | 106.6 | 102.0 | 117.2 | 76.8 | 132.3 | 46.3 | 98.3 | 96.7 | 109.0 | 72.8 | 124.1 | 43.4 |
| | 80 | 125.6 | 125.6 | 132.9 | 109.0 | 144.6 | 70.4 | 118.2 | 118.2 | 125.6 | 105.0 | 137.3 | 67.7 | 110.5 | 110.5 | 118.0 | 100.8 | 129.7 | 64.6 |
| | 85 | 137.0 | 137.0 | 141.0 | 133.6 | 149.4 | 102.3 | 130.2 | 130.2 | 134.3 | 129.4 | 142.8 | 99.3 | 123.1 | 123.1 | 127.2 | 124.9 | 135.7 | 96.0 |
| | 90 | 149.5 | 149.5 | 149.5 | 149.5 | 154.6 | 130.2 | 143.4 | 143.4 | 143.4 | 143.4 | 148.5 | 127.0 | 136.9 | 136.9 | 136.9 | 136.9 | 142.1 | 123.6 |
| 5800 | 75 | 117.1 | 110.6 | 126.8 | 84.0 | 140.8 | 49.3 | 109.2 | 105.6 | 118.9 | 80.2 | 133.0 | 46.6 | 100.9 | 100.4 | 110.7 | 76.2 | 124.8 | 43.7 |
| | 80 | 128.5 | 128.5 | 134.9 | 112.7 | 145.6 | 73.8 | 121.1 | 121.1 | 127.6 | 108.7 | 138.4 | 71.0 | 113.5 | 113.5 | 120.0 | 104.5 | 130.8 | 68.0 |
| | 85 | 140.2 | 140.2 | 143.3 | 137.6 | 150.7 | 105.9 | 133.4 | 133.4 | 136.6 | 133.4 | 144.1 | 103.0 | 128.2 | 128.2 | 129.5 | 128.9 | 137.1 | 99.7 |
| | 90 | 152.0 | 152.0 | 152.0 | 152.0 | 156.2 | 134.2 | 145.9 | 145.9 | 145.9 | 145.9 | 150.1 | 131.0 | 139.4 | 139.4 | 139.4 | 139.4 | 143.7 | 127.5 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 6. Gross cooling capacities T/YS*175FD (SI)**

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 30 | | | | | | 35 | | | | | | 40 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | | 16 | | 19 | | 22 | | 16 | | 19 | | 22 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 7985 | 24 | 46.9 | 39.4 | 52.1 | 29.4 | 59.4 | 20.8 | 42.1 | 36.6 | 47.2 | 27.5 | 54.5 | 19.1 | 36.7 | 33.4 | 41.8 | 25.2 | 49.0 | 17.1 |
| | 27 | 49.2 | 46.4 | 53.1 | 38.6 | 59.1 | 24.9 | 45.1 | 43.8 | 49.0 | 36.8 | 54.9 | 24.0 | 40.4 | 40.4 | 44.2 | 34.5 | 50.1 | 22.7 |
| | 30 | 51.8 | 51.8 | 54.3 | 46.4 | 59.0 | 34.9 | 48.4 | 48.4 | 50.9 | 44.8 | 55.5 | 34.1 | 44.4 | 44.4 | 46.9 | 42.6 | 51.4 | 32.8 |
| | 33 | 54.5 | 54.5 | 55.7 | 53.0 | 59.0 | 43.6 | 51.8 | 51.8 | 53.0 | 51.4 | 56.3 | 42.9 | 49.2 | 48.6 | 49.7 | 49.3 | 52.9 | 41.7 |
| 8750 | 24 | 48.2 | 40.9 | 53.2 | 30.9 | 60.3 | 21.1 | 43.4 | 38.1 | 48.3 | 29.0 | 55.4 | 19.4 | 38.0 | 34.9 | 42.9 | 26.7 | 49.9 | 17.5 |
| | 27 | 50.6 | 48.0 | 54.2 | 40.1 | 60.0 | 26.4 | 46.5 | 45.3 | 50.1 | 38.3 | 55.8 | 25.5 | 41.8 | 41.8 | 45.4 | 36.1 | 51.1 | 24.2 |
| | 30 | 53.1 | 53.1 | 55.5 | 48.0 | 59.9 | 36.4 | 49.8 | 49.8 | 52.1 | 46.3 | 56.5 | 35.7 | 45.8 | 45.8 | 48.1 | 44.2 | 52.4 | 34.4 |
| | 33 | 55.9 | 55.9 | 57.0 | 54.7 | 60.1 | 45.2 | 53.3 | 53.3 | 54.3 | 53.1 | 57.3 | 44.5 | 50.5 | 50.5 | 51.0 | 51.0 | 54.0 | 43.3 |
| 9515 | 24 | 49.4 | 42.4 | 54.2 | 32.4 | 61.1 | 21.4 | 44.6 | 39.6 | 49.4 | 30.5 | 56.2 | 19.7 | 39.3 | 36.3 | 44.0 | 28.1 | 50.8 | 17.8 |
| | 27 | 51.8 | 49.5 | 55.3 | 41.6 | 60.9 | 27.9 | 47.8 | 46.8 | 51.2 | 39.9 | 56.7 | 27.1 | 43.1 | 43.1 | 46.5 | 37.6 | 52.0 | 25.7 |
| | 30 | 54.4 | 54.4 | 56.6 | 49.6 | 60.8 | 38.0 | 51.1 | 51.1 | 53.2 | 47.9 | 57.4 | 37.2 | 47.2 | 47.2 | 49.3 | 45.7 | 53.4 | 35.9 |
| | 33 | 57.3 | 57.3 | 58.1 | 56.3 | 61.0 | 46.8 | 54.7 | 54.7 | 55.5 | 54.7 | 58.3 | 46.1 | 52.2 | 52.2 | 52.2 | 52.2 | 55.0 | 44.9 |
| 10280 | 24 | 50.5 | 43.8 | 55.1 | 33.8 | 61.8 | 21.6 | 45.8 | 41.1 | 50.3 | 32.0 | 57.0 | 19.9 | 40.4 | 37.8 | 45.0 | 29.6 | 51.5 | 18.0 |
| | 27 | 52.9 | 51.0 | 56.2 | 43.1 | 61.6 | 29.4 | 49.0 | 48.4 | 52.2 | 41.4 | 57.5 | 28.6 | 44.4 | 44.4 | 47.6 | 39.1 | 52.8 | 27.2 |
| | 30 | 55.6 | 55.6 | 57.6 | 51.2 | 61.7 | 39.6 | 52.4 | 52.4 | 54.3 | 49.5 | 58.3 | 38.8 | 48.5 | 48.5 | 50.4 | 47.3 | 54.3 | 37.5 |
| | 33 | 58.5 | 58.5 | 59.2 | 57.9 | 61.9 | 48.4 | 56.0 | 56.0 | 56.6 | 56.3 | 59.2 | 47.7 | 53.4 | 53.4 | 53.4 | 53.4 | 56.0 | 46.5 |
| 11045 | 24 | 51.5 | 45.3 | 55.9 | 35.3 | 62.4 | 21.8 | 46.8 | 42.5 | 51.2 | 33.4 | 57.6 | 20.2 | 41.5 | 39.2 | 45.9 | 31.0 | 52.2 | 18.3 |
| | 27 | 54.0 | 52.5 | 57.1 | 44.6 | 62.3 | 30.9 | 50.1 | 49.9 | 53.1 | 42.8 | 58.2 | 30.0 | 45.5 | 45.5 | 48.5 | 40.6 | 53.6 | 28.6 |
| | 30 | 56.8 | 56.8 | 58.5 | 52.7 | 62.4 | 41.1 | 53.5 | 53.5 | 55.3 | 51.0 | 59.0 | 40.3 | 49.7 | 49.7 | 51.4 | 48.8 | 55.1 | 39.0 |
| | 33 | 59.7 | 59.7 | 60.2 | 59.5 | 62.7 | 50.0 | 57.6 | 57.6 | 57.6 | 57.6 | 60.1 | 49.3 | 54.4 | 54.4 | 54.4 | 54.4 | 56.8 | 48.1 |

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 45 | | | | | | 49 | | | | | | 52 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | | 16 | | 19 | | 22 | | 16 | | 19 | | 22 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 7985 | 24 | 30.7 | 29.6 | 35.7 | 22.4 | 42.8 | 15.0 | 27.5 | 27.5 | 32.5 | 20.7 | 39.6 | 13.8 | 24.1 | 24.1 | 29.1 | 19.0 | 36.1 | 12.6 |
| | 27 | 35.2 | 35.2 | 38.9 | 31.8 | 44.7 | 20.8 | 32.3 | 32.3 | 36.0 | 30.2 | 41.8 | 19.7 | 29.3 | 29.3 | 32.9 | 28.5 | 38.7 | 18.4 |
| | 30 | 39.8 | 39.8 | 42.2 | 39.9 | 46.7 | 31.0 | 37.3 | 37.3 | 39.7 | 38.4 | 44.1 | 29.9 | 36.6 | 34.7 | 37.0 | 36.7 | 41.4 | 28.7 |
| | 33 | 45.8 | 45.8 | 45.8 | 45.8 | 48.9 | 40.0 | 43.6 | 43.6 | 43.6 | 43.6 | 46.7 | 38.9 | 41.3 | 41.3 | 41.3 | 41.3 | 44.4 | 37.8 |
| 8750 | 24 | 32.1 | 31.1 | 36.9 | 23.8 | 43.8 | 15.3 | 28.8 | 28.8 | 33.7 | 22.2 | 40.6 | 14.2 | 25.5 | 25.5 | 30.3 | 20.5 | 37.1 | 13.0 |
| | 27 | 36.6 | 36.6 | 40.1 | 33.3 | 45.7 | 22.3 | 33.7 | 33.7 | 37.2 | 31.7 | 42.8 | 21.2 | 30.7 | 30.7 | 34.2 | 30.0 | 39.8 | 19.9 |
| | 30 | 41.3 | 41.3 | 43.5 | 41.5 | 47.8 | 32.6 | 38.8 | 38.8 | 41.0 | 39.9 | 45.2 | 31.5 | 38.0 | 38.0 | 38.3 | 38.3 | 42.6 | 30.3 |
| | 33 | 47.1 | 47.1 | 47.1 | 47.1 | 50.1 | 41.6 | 45.0 | 45.0 | 45.0 | 45.0 | 47.9 | 40.5 | 42.7 | 42.7 | 42.7 | 42.7 | 45.6 | 39.4 |
| 9515 | 24 | 33.3 | 32.6 | 38.0 | 25.3 | 44.7 | 15.7 | 30.2 | 30.2 | 34.8 | 23.6 | 41.5 | 14.5 | 26.8 | 26.8 | 31.4 | 21.9 | 38.1 | 13.3 |
| | 27 | 37.9 | 37.9 | 41.3 | 34.8 | 46.7 | 23.8 | 35.1 | 35.1 | 38.4 | 33.2 | 43.8 | 22.7 | 32.1 | 32.1 | 35.4 | 31.5 | 40.7 | 21.4 |
| | 30 | 42.7 | 42.7 | 44.7 | 43.0 | 48.8 | 34.1 | 40.2 | 40.2 | 42.2 | 41.5 | 46.3 | 33.1 | 39.6 | 39.6 | 39.6 | 39.6 | 43.6 | 31.8 |
| | 33 | 48.4 | 48.4 | 48.4 | 48.4 | 51.1 | 43.2 | 46.2 | 46.2 | 46.2 | 46.2 | 49.0 | 42.1 | 44.0 | 44.0 | 44.0 | 44.0 | 46.7 | 41.0 |
| 10280 | 24 | 34.6 | 34.0 | 39.0 | 26.7 | 45.5 | 15.9 | 31.4 | 31.4 | 35.8 | 25.1 | 42.3 | 14.8 | 28.1 | 28.1 | 32.5 | 23.3 | 38.9 | 13.6 |
| | 27 | 39.2 | 39.2 | 42.3 | 36.3 | 47.5 | 25.3 | 36.4 | 36.4 | 39.5 | 34.7 | 44.7 | 24.2 | 33.4 | 33.4 | 36.5 | 33.0 | 41.6 | 22.9 |
| | 30 | 44.0 | 44.0 | 45.8 | 44.6 | 49.7 | 35.7 | 42.9 | 41.6 | 43.4 | 43.0 | 47.2 | 34.6 | 40.7 | 40.7 | 40.7 | 40.7 | 44.6 | 33.4 |
| | 33 | 49.6 | 49.6 | 49.6 | 49.6 | 52.1 | 44.8 | 47.4 | 47.4 | 47.4 | 47.4 | 50.0 | 43.7 | 45.2 | 45.2 | 45.2 | 45.2 | 47.7 | 42.6 |
| 11045 | 24 | 35.7 | 35.4 | 39.9 | 28.1 | 46.3 | 16.2 | 32.5 | 32.5 | 36.8 | 26.5 | 43.1 | 15.1 | 29.2 | 29.2 | 33.4 | 24.7 | 39.7 | 13.9 |
| | 27 | 40.4 | 40.4 | 43.3 | 37.8 | 48.3 | 26.8 | 37.6 | 37.6 | 40.5 | 36.2 | 45.5 | 25.6 | 34.6 | 34.6 | 37.5 | 34.4 | 42.5 | 24.4 |
| | 30 | 45.3 | 45.3 | 46.9 | 46.1 | 50.6 | 37.2 | 44.4 | 44.4 | 44.4 | 44.4 | 48.1 | 36.1 | 41.8 | 41.8 | 41.8 | 41.8 | 45.4 | 34.9 |
| | 33 | 50.7 | 50.7 | 50.7 | 50.7 | 53.0 | 46.4 | 48.5 | 48.5 | 48.5 | 48.5 | 50.9 | 45.3 | 46.3 | 46.3 | 46.3 | 46.3 | 48.6 | 44.1 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 7. Gross cooling capacities T/YS*175FD (IP)**

| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 85 — Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | | 95 — 61 | | 67 | | 73 | | 105 — 61 | | 67 | | 73 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 4700 | 75 | 160.0 | 134.4 | 177.8 | 100.3 | 202.7 | 70.9 | 143.6 | 125.0 | 161.2 | 94.0 | 185.9 | 65.1 | 125.1 | 113.9 | 142.5 | 86.0 | 167.0 | 58.5 |
| | 80 | 168.0 | 158.5 | 181.2 | 131.5 | 201.6 | 84.8 | 154.0 | 149.4 | 167.1 | 125.6 | 187.2 | 81.9 | 138.0 | 138.0 | 150.9 | 117.8 | 170.8 | 77.3 |
| | 85 | 176.6 | 176.6 | 185.3 | 158.4 | 201.2 | 118.9 | 165.0 | 165.0 | 173.6 | 152.7 | 189.3 | 116.3 | 151.5 | 151.5 | 159.9 | 145.3 | 175.3 | 111.9 |
| | 90 | 185.9 | 185.9 | 190.1 | 180.9 | 201.4 | 148.6 | 176.8 | 176.8 | 180.8 | 175.5 | 192.0 | 146.3 | 167.8 | 165.7 | 169.5 | 168.3 | 180.5 | 142.2 |
| 5150 | 75 | 164.3 | 139.5 | 181.4 | 105.3 | 205.6 | 72.0 | 148.0 | 130.1 | 165.0 | 99.0 | 189.0 | 66.1 | 129.7 | 119.0 | 146.4 | 91.0 | 170.2 | 59.6 |
| | 80 | 172.5 | 163.7 | 185.1 | 136.8 | 204.7 | 90.1 | 158.6 | 154.6 | 171.0 | 130.8 | 190.5 | 87.1 | 142.7 | 142.7 | 154.9 | 123.0 | 174.2 | 82.5 |
| | 85 | 181.3 | 181.3 | 189.4 | 163.9 | 204.5 | 124.3 | 169.9 | 169.9 | 177.8 | 158.1 | 192.7 | 121.7 | 156.4 | 156.4 | 164.1 | 150.6 | 178.9 | 117.3 |
| | 90 | 190.7 | 190.7 | 194.3 | 186.5 | 205.0 | 154.2 | 181.8 | 181.8 | 185.2 | 181.1 | 195.6 | 151.8 | 172.2 | 172.2 | 174.0 | 173.9 | 184.3 | 147.7 |
| 5600 | 75 | 168.4 | 144.5 | 184.8 | 110.4 | 208.3 | 72.9 | 152.2 | 135.1 | 168.4 | 104.1 | 191.8 | 67.1 | 134.0 | 124.0 | 150.1 | 96.0 | 173.2 | 60.6 |
| | 80 | 176.7 | 169.0 | 188.6 | 142.0 | 207.6 | 95.2 | 163.0 | 159.8 | 174.7 | 136.0 | 193.5 | 92.3 | 147.2 | 147.2 | 158.7 | 128.2 | 177.4 | 87.6 |
| | 85 | 185.7 | 185.7 | 193.1 | 169.2 | 207.6 | 129.7 | 174.4 | 174.4 | 181.6 | 163.5 | 195.9 | 127.0 | 161.1 | 161.1 | 168.1 | 156.0 | 182.2 | 122.6 |
| | 90 | 195.3 | 195.3 | 198.2 | 192.1 | 208.2 | 159.7 | 186.5 | 186.5 | 189.2 | 186.6 | 199.0 | 157.3 | 178.2 | 178.2 | 178.2 | 178.2 | 187.8 | 153.2 |
| 6050 | 75 | 172.1 | 149.5 | 187.9 | 115.4 | 210.7 | 73.8 | 156.1 | 140.1 | 171.7 | 109.0 | 194.3 | 68.0 | 138.0 | 128.9 | 153.4 | 100.9 | 175.8 | 61.5 |
| | 80 | 180.6 | 174.2 | 191.9 | 147.2 | 210.2 | 100.4 | 167.0 | 165.0 | 178.1 | 141.1 | 196.2 | 97.4 | 151.4 | 151.4 | 162.3 | 133.3 | 180.2 | 92.7 |
| | 85 | 189.8 | 189.8 | 196.6 | 174.6 | 210.4 | 135.0 | 178.7 | 178.7 | 185.2 | 168.8 | 198.8 | 132.3 | 165.5 | 165.5 | 171.8 | 161.3 | 185.3 | 127.9 |
| | 90 | 199.7 | 199.7 | 201.9 | 197.6 | 211.2 | 165.2 | 191.1 | 191.1 | 193.0 | 192.1 | 202.1 | 162.8 | 182.0 | 182.0 | 182.0 | 182.0 | 191.0 | 158.7 |
| 6500 | 75 | 175.6 | 154.5 | 190.7 | 120.3 | 212.9 | 74.5 | 159.7 | 145.0 | 174.6 | 113.9 | 196.6 | 68.8 | 141.7 | 133.8 | 156.4 | 105.8 | 178.2 | 62.4 |
| | 80 | 184.3 | 179.3 | 194.9 | 152.3 | 212.5 | 105.5 | 170.8 | 170.1 | 181.2 | 146.2 | 198.7 | 102.5 | 155.3 | 155.3 | 165.5 | 138.4 | 182.8 | 97.7 |
| | 85 | 193.7 | 193.7 | 199.7 | 179.9 | 212.9 | 140.3 | 182.6 | 182.6 | 188.5 | 174.1 | 201.5 | 137.5 | 169.6 | 169.6 | 175.2 | 166.5 | 188.0 | 133.1 |
| | 90 | 203.7 | 203.7 | 205.3 | 203.1 | 213.9 | 170.7 | 196.5 | 196.5 | 196.5 | 196.5 | 204.9 | 168.2 | 185.7 | 185.7 | 185.7 | 185.7 | 193.9 | 164.1 |

| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 115 — Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | | 120 — 61 | | 67 | | 73 | | 125 — 61 | | 67 | | 73 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 4700 | 75 | 104.7 | 101.1 | 121.9 | 76.3 | 146.2 | 51.2 | 93.7 | 93.7 | 110.8 | 70.8 | 135.0 | 47.2 | 82.2 | 82.2 | 99.2 | 64.8 | 123.3 | 43.1 |
| | 80 | 120.0 | 120.0 | 132.6 | 108.4 | 152.4 | 70.9 | 110.2 | 110.2 | 122.8 | 103.0 | 142.5 | 67.1 | 99.9 | 99.9 | 112.4 | 97.2 | 132.0 | 62.9 |
| | 85 | 135.9 | 135.9 | 144.1 | 136.1 | 159.3 | 105.9 | 127.3 | 127.3 | 135.4 | 130.9 | 150.6 | 102.2 | 125.0 | 118.3 | 126.3 | 125.2 | 141.4 | 98.1 |
| | 90 | 156.2 | 156.2 | 156.2 | 156.2 | 166.9 | 136.4 | 148.8 | 148.8 | 148.8 | 148.8 | 159.4 | 132.8 | 140.8 | 140.8 | 140.8 | 140.8 | 151.4 | 128.9 |
| 5150 | 75 | 109.4 | 106.1 | 125.9 | 81.3 | 149.5 | 52.3 | 98.4 | 98.4 | 114.9 | 75.7 | 138.4 | 48.4 | 87.0 | 87.0 | 103.3 | 69.8 | 126.7 | 44.4 |
| | 80 | 124.8 | 124.8 | 136.8 | 113.6 | 156.0 | 76.1 | 115.1 | 115.1 | 127.0 | 108.2 | 146.0 | 72.3 | 104.9 | 104.9 | 116.7 | 102.4 | 135.6 | 68.0 |
| | 85 | 141.0 | 141.0 | 148.5 | 141.4 | 163.1 | 111.2 | 132.5 | 132.5 | 139.9 | 136.2 | 154.4 | 107.5 | 129.5 | 129.5 | 130.8 | 130.5 | 145.2 | 103.4 |
| | 90 | 160.8 | 160.8 | 160.8 | 160.8 | 170.9 | 141.9 | 153.4 | 153.4 | 153.4 | 153.4 | 163.4 | 138.3 | 145.5 | 145.5 | 145.5 | 145.5 | 155.4 | 134.4 |
| 5600 | 75 | 113.8 | 111.1 | 129.6 | 86.2 | 152.6 | 53.4 | 102.9 | 102.9 | 118.7 | 80.7 | 141.5 | 49.5 | 91.5 | 91.5 | 107.2 | 74.7 | 129.9 | 45.5 |
| | 80 | 129.4 | 129.4 | 140.8 | 118.7 | 159.2 | 81.2 | 119.8 | 119.8 | 131.0 | 113.3 | 149.4 | 77.4 | 109.6 | 109.6 | 120.8 | 107.5 | 139.0 | 73.1 |
| | 85 | 145.7 | 145.7 | 152.6 | 146.8 | 166.5 | 116.5 | 137.3 | 137.3 | 144.1 | 141.5 | 157.9 | 112.8 | 135.0 | 135.0 | 135.0 | 135.0 | 148.8 | 108.6 |
| | 90 | 165.1 | 165.1 | 165.1 | 165.1 | 174.5 | 147.4 | 157.8 | 157.8 | 157.8 | 157.8 | 167.1 | 143.8 | 150.0 | 150.0 | 150.0 | 150.0 | 159.2 | 139.8 |
| 6050 | 75 | 117.9 | 116.0 | 133.1 | 91.1 | 155.3 | 54.4 | 107.1 | 107.1 | 122.2 | 85.6 | 144.3 | 50.5 | 95.8 | 95.8 | 110.7 | 79.6 | 132.8 | 46.5 |
| | 80 | 133.7 | 133.7 | 144.4 | 123.8 | 162.2 | 86.3 | 124.1 | 124.1 | 134.7 | 118.4 | 152.4 | 82.4 | 114.0 | 114.0 | 124.5 | 112.5 | 142.1 | 78.1 |
| | 85 | 150.2 | 150.2 | 156.4 | 152.0 | 169.7 | 121.7 | 146.5 | 141.9 | 147.9 | 146.7 | 161.1 | 118.0 | 139.0 | 139.0 | 139.0 | 139.0 | 152.0 | 113.9 |
| | 90 | 169.1 | 169.1 | 169.1 | 169.1 | 177.8 | 152.8 | 161.8 | 161.8 | 161.8 | 161.8 | 170.5 | 149.2 | 154.1 | 154.1 | 154.1 | 154.1 | 162.6 | 145.2 |
| 6500 | 75 | 121.7 | 120.9 | 136.3 | 96.0 | 157.8 | 55.2 | 111.0 | 111.0 | 125.4 | 90.4 | 146.9 | 51.4 | 99.7 | 99.7 | 114.0 | 84.4 | 135.4 | 47.4 |
| | 80 | 137.8 | 137.8 | 147.8 | 128.8 | 164.9 | 91.3 | 128.2 | 128.2 | 138.1 | 123.4 | 155.1 | 87.4 | 118.2 | 118.2 | 128.0 | 117.5 | 144.9 | 83.1 |
| | 85 | 154.5 | 154.5 | 160.0 | 157.2 | 172.5 | 126.9 | 151.6 | 151.6 | 151.6 | 151.6 | 164.0 | 123.2 | 142.6 | 142.6 | 142.6 | 142.6 | 155.0 | 119.0 |
| | 90 | 172.8 | 172.8 | 172.8 | 172.8 | 180.9 | 158.2 | 165.6 | 165.6 | 165.6 | 165.6 | 173.6 | 154.6 | 157.9 | 157.9 | 157.9 | 157.9 | 165.8 | 150.5 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 8. Gross cooling capacities T/YS*200FD (SI)**

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 30 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | | 35 — 16 | | 19 | | 22 | | 40 — 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 9005 | 24 | 57.5 | 47.4 | 63.3 | 35.1 | 71.6 | 25.1 | 52.6 | 44.6 | 58.4 | 33.3 | 66.6 | 23.3 | 47.6 | 41.6 | 53.2 | 31.2 | 61.3 | 21.5 |
| | 27 | 60.1 | 55.6 | 64.7 | 46.1 | 71.7 | 29.7 | 55.9 | 52.8 | 60.3 | 44.2 | 67.2 | 28.8 | 51.3 | 49.7 | 55.7 | 42.0 | 62.5 | 27.6 |
| | 30 | 62.7 | 62.1 | 65.9 | 55.3 | 71.6 | 41.7 | 58.9 | 58.9 | 62.1 | 53.4 | 67.7 | 40.7 | 55.0 | 55.0 | 58.0 | 51.2 | 63.5 | 39.5 |
| | 33 | 65.1 | 65.1 | 67.1 | 62.9 | 71.4 | 52.0 | 61.9 | 61.9 | 63.8 | 60.9 | 68.0 | 51.0 | 58.5 | 58.5 | 60.2 | 58.7 | 64.4 | 49.7 |
| 9940 | 24 | 59.7 | 49.7 | 65.2 | 37.1 | 73.1 | 25.6 | 54.8 | 46.9 | 60.2 | 35.3 | 68.1 | 23.8 | 49.7 | 43.9 | 55.0 | 33.2 | 62.8 | 22.0 |
| | 27 | 62.4 | 58.0 | 66.6 | 48.2 | 73.2 | 31.5 | 58.0 | 55.2 | 62.1 | 46.3 | 68.7 | 30.6 | 53.5 | 52.1 | 57.5 | 44.1 | 64.0 | 29.4 |
| | 30 | 64.9 | 64.6 | 67.8 | 57.5 | 73.2 | 43.6 | 61.1 | 61.1 | 63.9 | 55.6 | 69.2 | 42.6 | 57.1 | 57.1 | 59.8 | 53.4 | 65.0 | 41.4 |
| | 33 | 67.4 | 67.4 | 69.0 | 65.2 | 73.0 | 54.0 | 64.1 | 64.1 | 65.6 | 63.3 | 69.6 | 53.0 | 60.6 | 60.6 | 62.1 | 61.1 | 65.9 | 51.8 |
| 10875 | 24 | 61.5 | 51.6 | 66.7 | 38.7 | 74.3 | 26.0 | 56.6 | 48.8 | 61.7 | 36.9 | 69.2 | 24.2 | 51.5 | 45.8 | 56.5 | 34.8 | 63.9 | 22.4 |
| | 27 | 64.2 | 60.1 | 68.1 | 49.9 | 74.4 | 33.0 | 59.8 | 57.2 | 63.6 | 48.0 | 69.8 | 32.0 | 55.3 | 54.2 | 58.9 | 45.9 | 65.1 | 30.9 |
| | 30 | 66.8 | 66.8 | 69.3 | 59.4 | 74.3 | 45.2 | 63.0 | 63.0 | 65.4 | 57.5 | 70.3 | 44.2 | 58.9 | 58.9 | 61.3 | 55.3 | 66.1 | 43.0 |
| | 33 | 69.2 | 69.2 | 70.5 | 67.2 | 74.2 | 55.8 | 66.0 | 66.0 | 67.1 | 65.3 | 70.7 | 54.7 | 62.9 | 62.5 | 63.5 | 63.1 | 67.1 | 53.5 |
| 11810 | 24 | 63.0 | 53.2 | 67.8 | 40.0 | 75.0 | 26.3 | 58.1 | 50.4 | 62.8 | 38.2 | 69.9 | 24.5 | 52.9 | 47.4 | 57.5 | 36.1 | 64.6 | 22.6 |
| | 27 | 65.7 | 61.7 | 69.2 | 51.3 | 75.2 | 34.1 | 61.3 | 58.9 | 64.7 | 49.4 | 70.6 | 33.1 | 56.7 | 55.9 | 60.0 | 47.3 | 65.8 | 32.0 |
| | 30 | 68.3 | 68.3 | 70.5 | 60.9 | 75.2 | 46.4 | 64.4 | 64.4 | 66.6 | 59.0 | 71.1 | 45.5 | 60.4 | 60.4 | 62.4 | 56.9 | 66.9 | 44.2 |
| | 33 | 70.8 | 70.8 | 71.7 | 68.9 | 75.0 | 57.1 | 67.4 | 67.4 | 68.3 | 66.9 | 71.5 | 56.1 | 64.6 | 64.6 | 64.6 | 64.6 | 67.8 | 54.8 |
| 12745 | 24 | 64.1 | 54.4 | 68.6 | 40.9 | 75.5 | 26.4 | 59.1 | 51.6 | 63.5 | 39.1 | 70.3 | 24.6 | 53.9 | 48.6 | 58.2 | 37.0 | 64.9 | 22.7 |
| | 27 | 66.8 | 63.1 | 70.0 | 52.4 | 75.6 | 34.8 | 62.4 | 60.3 | 65.5 | 50.5 | 71.0 | 33.9 | 57.7 | 57.2 | 60.7 | 48.4 | 66.2 | 32.7 |
| | 30 | 69.4 | 69.4 | 71.3 | 62.1 | 75.6 | 47.3 | 65.5 | 65.5 | 67.3 | 60.2 | 71.5 | 46.4 | 61.4 | 61.4 | 63.1 | 58.0 | 67.3 | 45.1 |
| | 33 | 71.9 | 71.9 | 72.5 | 70.2 | 75.5 | 58.1 | 68.6 | 68.6 | 69.1 | 68.2 | 72.0 | 57.1 | 65.4 | 65.4 | 65.4 | 65.4 | 68.2 | 55.9 |

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 45 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | | 49 — 16 | | 19 | | 22 | | 52 — 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 9005 | 24 | 42.3 | 38.3 | 47.9 | 28.8 | 55.9 | 19.6 | 39.5 | 36.6 | 45.1 | 27.6 | 53.0 | 18.6 | 36.7 | 34.8 | 42.2 | 26.2 | NA | NA |
| | 27 | 46.6 | 46.4 | 50.8 | 39.7 | 57.6 | 26.1 | 44.1 | 44.1 | 48.3 | 38.4 | 55.0 | 25.3 | 41.6 | 41.6 | 45.8 | 37.0 | NA | NA |
| | 30 | 50.7 | 50.7 | 53.7 | 48.8 | 59.1 | 38.0 | 48.5 | 48.5 | 51.5 | 47.5 | 56.8 | 37.2 | 46.3 | 46.3 | 49.2 | 46.1 | NA | NA |
| | 33 | 55.9 | 55.9 | 56.5 | 56.2 | 60.6 | 48.2 | 54.5 | 54.5 | 54.5 | 54.5 | 58.6 | 47.3 | 52.5 | 52.5 | 52.5 | 52.5 | NA | NA |
| 9940 | 24 | 44.4 | 40.6 | 49.6 | 30.8 | 57.3 | 20.0 | 41.6 | 38.8 | 46.8 | 29.6 | 54.4 | 19.1 | 38.8 | 37.0 | 43.9 | 28.2 | NA | NA |
| | 27 | 48.7 | 48.7 | 52.6 | 41.8 | 59.0 | 27.9 | 46.2 | 46.2 | 50.1 | 40.5 | 56.4 | 27.1 | 43.6 | 43.6 | 47.5 | 39.1 | NA | NA |
| | 30 | 52.9 | 52.9 | 55.5 | 51.0 | 60.6 | 39.9 | 50.6 | 50.6 | 53.2 | 49.7 | 58.3 | 39.1 | 48.4 | 48.4 | 50.9 | 48.4 | NA | NA |
| | 33 | 58.3 | 58.3 | 58.3 | 58.3 | 62.0 | 50.3 | 56.3 | 56.3 | 56.3 | 56.3 | 60.0 | 49.4 | 54.2 | 54.2 | 54.2 | 54.2 | NA | NA |
| 10875 | 24 | 46.1 | 42.5 | 51.0 | 32.5 | 58.3 | 20.4 | 43.3 | 40.8 | 48.2 | 31.2 | 55.5 | 19.4 | 40.5 | 39.0 | 45.3 | 29.9 | NA | NA |
| | 27 | 50.4 | 50.4 | 54.0 | 43.5 | 60.0 | 29.4 | 47.9 | 47.9 | 51.5 | 42.3 | 57.5 | 28.6 | 45.4 | 45.4 | 48.9 | 40.9 | NA | NA |
| | 30 | 54.6 | 54.6 | 56.9 | 52.9 | 61.6 | 41.5 | 52.4 | 52.4 | 54.6 | 51.6 | 59.3 | 40.7 | 50.1 | 50.1 | 52.3 | 50.3 | NA | NA |
| | 33 | 59.7 | 59.7 | 59.7 | 59.7 | 63.1 | 52.0 | 57.7 | 57.7 | 57.7 | 57.7 | 61.1 | 51.1 | 55.6 | 55.6 | 55.6 | 55.6 | NA | NA |
| 11810 | 24 | 47.5 | 44.1 | 52.0 | 33.7 | 59.0 | 20.7 | 44.7 | 42.4 | 49.2 | 32.5 | 56.1 | 19.6 | 41.8 | 40.6 | 46.3 | 31.2 | NA | NA |
| | 27 | 51.8 | 51.8 | 55.1 | 44.9 | 60.7 | 30.5 | 49.3 | 49.3 | 52.5 | 43.7 | 58.1 | 29.7 | 46.7 | 46.7 | 49.9 | 42.3 | NA | NA |
| | 30 | 56.0 | 56.0 | 58.0 | 54.5 | 62.4 | 42.8 | 53.8 | 53.8 | 55.7 | 53.2 | 60.0 | 42.0 | 51.5 | 51.5 | 53.3 | 51.8 | NA | NA |
| | 33 | 60.8 | 60.8 | 60.8 | 60.8 | 63.9 | 53.3 | 58.7 | 58.7 | 58.7 | 58.7 | 61.8 | 52.5 | 56.7 | 56.7 | 56.7 | 56.7 | NA | NA |
| 12745 | 24 | 48.5 | 45.3 | 52.7 | 34.7 | 59.3 | 20.8 | 45.7 | 43.6 | 49.8 | 33.4 | 56.4 | 19.8 | 42.8 | 41.8 | 46.9 | 32.1 | NA | NA |
| | 27 | 52.8 | 52.8 | 55.7 | 46.0 | 61.1 | 31.3 | 50.3 | 50.3 | 53.2 | 44.7 | 58.5 | 30.5 | 47.7 | 47.7 | 50.5 | 43.4 | NA | NA |
| | 30 | 57.1 | 57.1 | 58.7 | 55.6 | 62.7 | 43.7 | 54.8 | 54.8 | 56.4 | 54.3 | 60.4 | 42.8 | 52.5 | 52.5 | 54.0 | 53.0 | NA | NA |
| | 33 | 61.5 | 61.5 | 61.5 | 61.5 | 64.2 | 54.4 | 59.4 | 59.4 | 59.4 | 59.4 | 62.1 | 53.5 | NA | NA | NA | NA | NA | NA |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 9. Gross cooling capacities T/YS*200FD (IP)**

| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 85 | | | | | | 95 | | | | | | 105 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 5300 | 75 | 196.1 | 161.7 | 216.0 | 119.8 | 244.3 | 85.5 | 179.6 | 152.2 | 199.2 | 113.5 | 227.2 | 79.5 | 162.3 | 141.9 | 181.7 | 106.4 | 209.3 | 73.3 |
| | 80 | 205.2 | 189.7 | 220.7 | 157.1 | 244.5 | 101.4 | 190.6 | 180.1 | 205.7 | 150.7 | 229.3 | 98.1 | 175.1 | 169.6 | 190.0 | 143.4 | 213.2 | 94.1 |
| | 85 | 213.9 | 211.9 | 224.9 | 188.7 | 244.3 | 142.3 | 201.1 | 201.1 | 211.8 | 182.1 | 230.9 | 138.9 | 187.5 | 187.5 | 197.9 | 174.7 | 216.7 | 134.7 |
| | 90 | 222.1 | 222.1 | 228.8 | 214.5 | 243.7 | 177.4 | 211.2 | 211.2 | 217.5 | 207.8 | 232.2 | 173.9 | 199.4 | 199.4 | 205.5 | 200.3 | 219.8 | 169.6 |
| 5850 | 75 | 203.6 | 169.5 | 222.3 | 126.6 | 249.4 | 87.3 | 187.0 | 160.0 | 205.5 | 120.3 | 232.2 | 81.3 | 169.6 | 149.6 | 187.8 | 113.1 | 214.2 | 75.0 |
| | 80 | 212.7 | 197.9 | 227.1 | 164.3 | 249.7 | 107.5 | 198.0 | 188.3 | 212.0 | 157.9 | 234.4 | 104.3 | 182.4 | 177.8 | 196.2 | 150.6 | 218.2 | 100.3 |
| | 85 | 221.5 | 220.5 | 231.4 | 196.3 | 249.6 | 148.8 | 208.6 | 208.6 | 218.2 | 189.7 | 236.1 | 145.5 | 194.9 | 194.9 | 204.2 | 182.4 | 221.8 | 141.3 |
| | 90 | 229.8 | 229.8 | 235.3 | 222.5 | 249.0 | 184.4 | 218.7 | 218.7 | 223.9 | 215.8 | 237.4 | 180.9 | 206.9 | 206.9 | 211.7 | 208.3 | 224.9 | 176.6 |
| 6400 | 75 | 209.8 | 176.1 | 227.4 | 132.1 | 253.3 | 88.7 | 193.1 | 166.6 | 210.4 | 125.8 | 236.0 | 82.6 | 175.6 | 156.2 | 192.6 | 118.7 | 217.9 | 76.3 |
| | 80 | 219.0 | 204.9 | 232.2 | 170.3 | 253.7 | 112.5 | 204.2 | 195.3 | 217.0 | 163.9 | 238.2 | 109.3 | 188.5 | 184.8 | 201.1 | 156.6 | 221.9 | 105.3 |
| | 85 | 227.8 | 227.8 | 236.6 | 202.7 | 253.6 | 154.2 | 214.8 | 214.8 | 223.2 | 196.2 | 240.0 | 150.9 | 201.0 | 201.0 | 209.1 | 188.8 | 225.6 | 146.7 |
| | 90 | 236.2 | 236.2 | 240.5 | 229.3 | 253.1 | 190.2 | 225.0 | 225.0 | 229.0 | 222.7 | 241.3 | 186.8 | 214.6 | 213.1 | 216.8 | 215.2 | 228.8 | 182.5 |
| 6950 | 75 | 214.9 | 181.4 | 231.3 | 136.5 | 256.0 | 89.6 | 198.1 | 171.9 | 214.2 | 130.2 | 238.6 | 83.5 | 180.4 | 161.6 | 196.2 | 123.1 | 220.4 | 77.1 |
| | 80 | 224.1 | 210.7 | 236.1 | 175.1 | 256.4 | 116.3 | 209.2 | 201.1 | 220.8 | 168.7 | 240.8 | 113.1 | 193.4 | 190.6 | 204.8 | 161.4 | 224.4 | 109.1 |
| | 85 | 233.0 | 233.0 | 240.5 | 207.9 | 256.4 | 158.4 | 219.8 | 219.8 | 227.1 | 201.4 | 242.7 | 155.1 | 205.9 | 205.9 | 212.9 | 194.0 | 228.1 | 151.0 |
| | 90 | 241.4 | 241.4 | 244.5 | 235.0 | 256.0 | 194.8 | 230.1 | 230.1 | 232.9 | 228.3 | 244.1 | 191.4 | 220.6 | 220.6 | 220.6 | 220.6 | 231.4 | 187.1 |
| 7500 | 75 | 218.7 | 185.6 | 233.9 | 139.6 | 257.5 | 90.1 | 201.7 | 176.1 | 216.7 | 133.4 | 239.9 | 84.0 | 184.0 | 165.8 | 198.6 | 126.3 | 221.6 | 77.6 |
| | 80 | 228.0 | 215.3 | 238.8 | 178.7 | 257.9 | 118.9 | 212.9 | 205.7 | 223.4 | 172.3 | 242.2 | 115.7 | 197.0 | 195.2 | 207.2 | 165.0 | 225.7 | 111.7 |
| | 85 | 236.9 | 236.9 | 243.3 | 211.9 | 258.0 | 161.4 | 223.6 | 223.6 | 229.7 | 205.4 | 244.1 | 158.2 | 209.6 | 209.6 | 215.4 | 198.0 | 229.5 | 154.0 |
| | 90 | 245.4 | 245.4 | 247.3 | 239.4 | 257.6 | 198.3 | 234.0 | 234.0 | 235.6 | 232.8 | 245.6 | 194.8 | 223.1 | 223.1 | 223.1 | 223.1 | 232.8 | 190.6 |

| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 115 | | | | | | 120 | | | | | | 125 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | | 61 | | 67 | | 73 | | 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 5300 | 75 | 144.3 | 130.7 | 163.3 | 98.4 | 190.6 | 66.7 | 134.9 | 124.7 | 153.8 | 94.0 | 180.9 | 63.3 | 125.4 | 118.6 | 144.1 | 89.5 | NA | NA |
| | 80 | 158.9 | 158.3 | 173.5 | 135.3 | 196.4 | 89.1 | 150.4 | 150.4 | 164.9 | 130.9 | 187.6 | 86.4 | 141.8 | 141.8 | 156.1 | 126.3 | NA | NA |
| | 85 | 173.1 | 173.1 | 183.2 | 166.5 | 201.7 | 129.7 | 165.6 | 165.6 | 175.6 | 162.0 | 193.9 | 126.8 | 157.9 | 157.9 | 167.7 | 157.4 | NA | NA |
| | 90 | 190.7 | 190.7 | 192.6 | 191.9 | 206.7 | 164.4 | 185.9 | 185.9 | 185.9 | 185.9 | 199.8 | 161.5 | 178.9 | 178.9 | 178.9 | 178.9 | NA | NA |
| 5850 | 75 | 151.4 | 138.4 | 169.3 | 105.1 | 195.4 | 68.4 | 142.0 | 132.5 | 159.7 | 100.8 | 185.7 | 65.0 | 132.4 | 126.4 | 149.9 | 96.3 | NA | NA |
| | 80 | 166.1 | 166.1 | 179.5 | 142.5 | 201.2 | 95.3 | 157.6 | 157.6 | 170.9 | 138.1 | 192.4 | 92.6 | 148.9 | 148.9 | 162.0 | 133.5 | NA | NA |
| | 85 | 180.3 | 180.3 | 189.3 | 174.1 | 206.6 | 136.3 | 172.8 | 172.8 | 181.6 | 169.7 | 198.8 | 133.4 | 165.0 | 165.0 | 173.7 | 165.0 | NA | NA |
| | 90 | 198.8 | 198.8 | 198.8 | 198.8 | 211.6 | 171.5 | 192.0 | 192.0 | 192.0 | 192.0 | 204.7 | 168.6 | 185.0 | 185.0 | 185.0 | 185.0 | NA | NA |
| 6400 | 75 | 157.3 | 145.0 | 174.0 | 110.7 | 199.0 | 69.6 | 147.9 | 139.1 | 164.4 | 106.4 | 189.2 | 66.2 | 138.2 | 133.0 | 154.6 | 101.9 | NA | NA |
| | 80 | 172.0 | 172.0 | 184.3 | 148.5 | 204.9 | 100.4 | 163.5 | 163.5 | 175.6 | 144.2 | 196.0 | 97.6 | 154.8 | 154.8 | 166.7 | 139.6 | NA | NA |
| | 85 | 186.4 | 186.4 | 194.2 | 180.6 | 210.3 | 141.7 | 178.8 | 178.8 | 186.4 | 176.1 | 202.4 | 138.9 | 170.9 | 170.9 | 178.4 | 171.5 | NA | NA |
| | 90 | 203.7 | 203.7 | 203.7 | 203.7 | 215.4 | 177.3 | 196.8 | 196.8 | 196.8 | 196.8 | 208.4 | 174.4 | 189.8 | 189.8 | 189.8 | 189.8 | NA | NA |
| 6950 | 75 | 162.0 | 150.4 | 177.5 | 115.1 | 201.3 | 70.5 | 152.5 | 144.5 | 167.8 | 110.8 | 191.5 | 67.0 | 142.8 | 138.4 | 158.0 | 106.3 | NA | NA |
| | 80 | 176.8 | 176.8 | 187.9 | 153.3 | 207.3 | 104.2 | 168.2 | 168.2 | 179.1 | 149.0 | 198.4 | 101.4 | 159.4 | 159.4 | 170.2 | 144.4 | NA | NA |
| | 85 | 191.2 | 191.2 | 197.8 | 185.8 | 212.8 | 146.0 | 183.5 | 183.5 | 190.0 | 181.4 | 204.8 | 143.1 | 175.6 | 175.6 | 182.0 | 176.7 | NA | NA |
| | 90 | 207.3 | 207.3 | 207.3 | 207.3 | 217.9 | 182.0 | 200.4 | 200.4 | 200.4 | 200.4 | 210.8 | 179.1 | 193.3 | 193.3 | 193.3 | 193.3 | NA | NA |
| 7500 | 75 | 165.4 | 154.6 | 179.8 | 118.3 | 202.4 | 70.9 | 155.9 | 148.7 | 170.1 | 114.0 | 192.6 | 67.4 | 146.1 | 142.6 | 160.1 | 109.5 | NA | NA |
| | 80 | 180.3 | 180.3 | 190.2 | 157.0 | 208.4 | 106.8 | 171.6 | 171.6 | 181.4 | 152.6 | 199.5 | 104.0 | 162.8 | 162.8 | 172.4 | 148.0 | NA | NA |
| | 85 | 194.7 | 194.7 | 200.2 | 189.8 | 214.0 | 149.0 | 187.0 | 187.0 | 192.3 | 185.4 | 205.9 | 146.2 | 179.0 | 179.0 | 184.2 | 180.8 | NA | NA |
| | 90 | 209.8 | 209.8 | 209.8 | 209.8 | 219.1 | 185.4 | 202.8 | 202.8 | 202.8 | 202.8 | 212.0 | 182.6 | NA | NA | NA | NA | NA | NA |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 10. Gross cooling capacities T/YS*250FD (SI)**

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 30 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | | 35 — 16 | | 19 | | 22 | | 40 — 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 11380 | 24 | 66.1 | 54.9 | 70.9 | 39.4 | 77.7 | 27.2 | 61.5 | 52.4 | 66.3 | 38.0 | 73.0 | 25.6 | 56.4 | 49.4 | 61.1 | 36.0 | 67.7 | 23.7 |
| | 27 | 68.6 | 64.1 | 72.3 | 52.1 | 77.9 | 31.6 | 64.5 | 61.4 | 68.1 | 50.5 | 73.7 | 31.1 | 59.8 | 58.2 | 63.4 | 48.4 | 68.9 | 30.1 |
| | 30 | 70.8 | 70.8 | 73.4 | 62.7 | 77.9 | 45.7 | 67.2 | 67.2 | 69.7 | 60.9 | 74.1 | 45.0 | 63.0 | 63.0 | 65.4 | 58.6 | 69.9 | 43.8 |
| | 33 | 72.7 | 72.7 | 74.1 | 71.1 | 77.5 | 57.7 | 69.6 | 69.6 | 71.0 | 69.2 | 74.3 | 56.8 | 66.5 | 65.9 | 67.2 | 66.6 | 70.5 | 55.4 |
| 12490 | 24 | 67.6 | 56.6 | 72.1 | 41.1 | 78.6 | 27.5 | 62.9 | 54.1 | 67.4 | 39.7 | 73.8 | 25.8 | 57.8 | 51.1 | 62.2 | 37.8 | 68.6 | 24.0 |
| | 27 | 70.1 | 65.9 | 73.5 | 53.9 | 78.9 | 33.4 | 66.0 | 63.2 | 69.3 | 52.3 | 74.7 | 32.9 | 61.4 | 60.0 | 64.6 | 50.2 | 69.9 | 31.9 |
| | 30 | 72.4 | 72.4 | 74.7 | 64.5 | 78.9 | 47.6 | 68.8 | 68.8 | 71.0 | 62.8 | 75.2 | 46.9 | 64.7 | 64.7 | 66.8 | 60.5 | 70.9 | 45.7 |
| | 33 | 74.5 | 74.5 | 75.6 | 73.0 | 78.7 | 59.6 | 71.4 | 71.4 | 72.4 | 71.1 | 75.5 | 58.8 | 68.0 | 68.0 | 68.7 | 68.7 | 71.7 | 57.4 |
| 13590 | 24 | 68.8 | 58.2 | 73.0 | 42.7 | 79.2 | 27.7 | 64.2 | 55.8 | 68.4 | 41.4 | 74.5 | 26.1 | 59.1 | 52.9 | 63.2 | 39.5 | 69.3 | 24.3 |
| | 27 | 71.5 | 67.6 | 74.6 | 55.6 | 79.7 | 35.1 | 67.4 | 65.0 | 70.4 | 54.1 | 75.5 | 34.7 | 62.8 | 61.9 | 65.7 | 52.0 | 70.7 | 33.7 |
| | 30 | 73.9 | 73.9 | 75.9 | 66.3 | 79.8 | 49.3 | 70.3 | 70.3 | 72.2 | 64.6 | 76.1 | 48.8 | 66.2 | 66.2 | 68.0 | 62.4 | 71.8 | 47.6 |
| | 33 | 76.1 | 76.1 | 76.9 | 74.9 | 79.7 | 61.5 | 73.0 | 73.0 | 73.7 | 73.0 | 76.5 | 60.7 | 70.0 | 70.0 | 70.0 | 70.0 | 72.7 | 59.4 |
| 14700 | 24 | 69.9 | 59.8 | 73.8 | 44.3 | 79.7 | 27.9 | 65.3 | 57.5 | 69.2 | 43.0 | 75.1 | 26.3 | 60.2 | 54.6 | 64.0 | 41.2 | 69.8 | 24.4 |
| | 27 | 72.7 | 69.3 | 75.5 | 57.3 | 80.3 | 36.7 | 68.6 | 66.7 | 71.4 | 55.8 | 76.1 | 36.4 | 64.0 | 63.6 | 66.7 | 53.8 | 71.4 | 35.5 |
| | 30 | 75.2 | 75.2 | 76.9 | 68.1 | 80.5 | 51.1 | 71.6 | 71.6 | 73.3 | 66.4 | 76.9 | 50.6 | 67.5 | 67.5 | 69.1 | 64.3 | 72.6 | 49.5 |
| | 33 | 77.5 | 77.5 | 78.0 | 76.7 | 80.5 | 63.3 | 74.9 | 74.9 | 74.9 | 74.9 | 77.3 | 62.6 | 71.2 | 71.2 | 71.2 | 71.2 | 73.6 | 61.3 |
| 15800 | 24 | 70.8 | 61.4 | 74.5 | 45.8 | 80.1 | 28.0 | 66.3 | 59.1 | 69.9 | 44.6 | 75.4 | 26.4 | 61.2 | 56.2 | 64.7 | 42.8 | 70.2 | 24.6 |
| | 27 | 73.8 | 70.9 | 76.3 | 58.9 | 80.7 | 38.4 | 69.7 | 68.4 | 72.1 | 57.5 | 76.6 | 38.1 | 65.1 | 65.1 | 67.5 | 55.5 | 71.9 | 37.2 |
| | 30 | 76.4 | 76.4 | 77.8 | 69.8 | 81.1 | 52.8 | 72.8 | 72.8 | 74.1 | 68.2 | 77.4 | 52.3 | 68.7 | 68.7 | 70.0 | 66.1 | 73.2 | 51.3 |
| | 33 | 78.2 | 78.2 | 79.0 | 78.5 | 81.2 | 65.1 | 75.9 | 75.9 | 75.9 | 75.9 | 78.0 | 64.4 | 72.2 | 72.2 | 72.2 | 72.2 | 74.3 | 63.2 |

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 45 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | | 49 — 16 | | 19 | | 22 | | 52 — 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 11380 | 24 | 50.6 | 45.8 | 55.3 | 33.5 | 61.9 | 21.7 | 47.6 | 43.7 | 52.2 | 32.0 | 58.8 | 20.6 | 44.4 | 41.6 | 49.0 | 30.4 | 55.6 | 19.4 |
| | 27 | 54.6 | 54.4 | 58.1 | 45.7 | 63.6 | 28.5 | 51.8 | 51.8 | 55.3 | 44.1 | 60.8 | 27.5 | 48.8 | 48.8 | 52.3 | 42.4 | 57.8 | 26.3 |
| | 30 | 58.3 | 58.3 | 60.7 | 55.7 | 65.0 | 42.0 | 55.7 | 55.7 | 58.1 | 54.1 | 62.4 | 40.9 | 53.0 | 53.0 | 55.3 | 52.3 | 59.7 | 39.7 |
| | 33 | 62.9 | 62.9 | 62.9 | 62.9 | 66.2 | 53.4 | 60.6 | 60.6 | 60.6 | 60.6 | 63.8 | 52.3 | 58.1 | 58.1 | 58.1 | 58.1 | 61.3 | 50.9 |
| 12490 | 24 | 52.1 | 47.6 | 56.4 | 35.3 | 62.8 | 22.0 | 49.0 | 45.6 | 53.4 | 33.9 | 59.7 | 20.9 | 45.9 | 43.5 | 50.2 | 32.3 | 56.4 | 19.8 |
| | 27 | 56.2 | 56.2 | 59.4 | 47.6 | 64.6 | 30.4 | 53.4 | 53.4 | 56.6 | 46.0 | 61.7 | 29.4 | 50.4 | 50.4 | 53.6 | 44.4 | 58.7 | 28.2 |
| | 30 | 60.0 | 60.0 | 62.0 | 57.7 | 66.1 | 44.0 | 57.4 | 57.4 | 59.5 | 56.1 | 63.5 | 42.9 | 54.7 | 54.7 | 56.7 | 54.3 | 60.8 | 41.7 |
| | 33 | 64.4 | 64.4 | 64.4 | 64.4 | 67.4 | 55.5 | 62.1 | 62.1 | 62.1 | 62.1 | 65.0 | 54.3 | 59.6 | 59.6 | 59.6 | 59.6 | 62.5 | 53.0 |
| 13590 | 24 | 53.4 | 49.4 | 57.5 | 37.1 | 63.5 | 22.2 | 50.3 | 47.4 | 54.4 | 35.7 | 60.4 | 21.1 | 47.2 | 45.3 | 51.2 | 34.1 | 57.2 | 20.0 |
| | 27 | 57.6 | 57.6 | 60.5 | 49.4 | 65.4 | 32.2 | 54.8 | 54.8 | 57.7 | 47.9 | 62.6 | 31.2 | 51.8 | 51.8 | 54.7 | 46.3 | 59.6 | 30.1 |
| | 30 | 61.5 | 61.5 | 63.3 | 59.6 | 67.1 | 45.9 | 58.9 | 58.9 | 60.7 | 58.0 | 64.5 | 44.9 | 56.2 | 56.2 | 58.0 | 56.3 | 61.7 | 43.7 |
| | 33 | 65.8 | 65.8 | 65.8 | 65.8 | 68.4 | 57.5 | 63.4 | 63.4 | 63.4 | 63.4 | 66.1 | 56.4 | 61.0 | 61.0 | 61.0 | 61.0 | 63.6 | 55.1 |
| 14700 | 24 | 54.5 | 51.1 | 58.3 | 38.8 | 64.1 | 22.4 | 51.5 | 49.2 | 55.2 | 37.4 | 61.0 | 21.3 | 48.3 | 47.1 | 52.0 | 35.9 | 57.7 | 20.2 |
| | 27 | 58.8 | 58.8 | 61.5 | 51.2 | 66.1 | 34.0 | 56.0 | 56.0 | 58.6 | 49.8 | 63.2 | 33.1 | 53.1 | 53.1 | 55.7 | 48.1 | 60.3 | 32.0 |
| | 30 | 62.8 | 62.8 | 64.3 | 61.5 | 67.8 | 47.8 | 60.3 | 60.3 | 61.8 | 59.9 | 65.2 | 46.8 | 57.6 | 57.6 | 59.1 | 58.2 | 62.5 | 45.6 |
| | 33 | 67.0 | 67.0 | 67.0 | 67.0 | 69.3 | 59.5 | 64.6 | 64.6 | 64.6 | 64.6 | 67.0 | 58.3 | 62.2 | 62.2 | 62.2 | 62.2 | 64.5 | 57.1 |
| 15800 | 24 | 55.5 | 52.8 | 59.0 | 40.5 | 64.5 | 22.6 | 52.5 | 50.9 | 55.9 | 39.2 | 61.4 | 21.5 | 49.3 | 48.8 | 52.8 | 37.6 | 58.2 | 20.4 |
| | 27 | 59.9 | 59.9 | 62.3 | 53.0 | 66.6 | 35.8 | 57.1 | 57.1 | 59.5 | 51.6 | 63.8 | 34.9 | 54.2 | 54.2 | 56.5 | 50.0 | 60.8 | 33.8 |
| | 30 | 64.0 | 64.0 | 65.3 | 63.4 | 68.5 | 49.7 | 61.5 | 61.5 | 62.7 | 61.8 | 65.9 | 48.7 | 60.0 | 60.0 | 60.0 | 60.0 | 63.2 | 47.5 |
| | 33 | 68.0 | 68.0 | 68.0 | 68.0 | 70.0 | 61.4 | 65.7 | 65.7 | 65.7 | 65.7 | 67.7 | 60.3 | 63.2 | 63.2 | 63.2 | 63.2 | 65.2 | 59.1 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

*Gross Cooling Capacities*

**Table 11. Gross cooling capacities T/YS*250FD (IP)**

| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 85 — Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | | 95 — 61 | | 67 | | 73 | | 105 — 61 | | 67 | | 73 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 6700 | 75 | 225.7 | 187.4 | 242.0 | 134.4 | 265.2 | 92.8 | 209.9 | 178.9 | 226.1 | 129.6 | 249.1 | 87.2 | 192.3 | 168.4 | 208.3 | 122.9 | 231.1 | 80.9 |
| | 80 | 234.1 | 218.8 | 246.6 | 177.8 | 265.9 | 107.9 | 220.0 | 209.6 | 232.4 | 172.4 | 251.5 | 106.2 | 204.1 | 198.6 | 216.3 | 165.1 | 235.2 | 102.6 |
| | 85 | 241.6 | 241.6 | 250.3 | 213.9 | 265.7 | 156.0 | 229.2 | 229.2 | 237.7 | 207.9 | 252.9 | 153.7 | 215.0 | 215.0 | 223.3 | 199.9 | 238.3 | 149.5 |
| | 90 | 248.2 | 248.2 | 253.0 | 242.6 | 264.5 | 196.8 | 237.5 | 237.5 | 242.1 | 235.9 | 253.4 | 193.9 | 227.0 | 224.9 | 229.3 | 227.4 | 240.5 | 189.0 |
| 7350 | 75 | 230.5 | 193.1 | 245.8 | 140.1 | 268.0 | 93.8 | 214.7 | 184.7 | 230.0 | 135.4 | 251.9 | 88.2 | 197.2 | 174.5 | 212.2 | 128.9 | 234.0 | 81.9 |
| | 80 | 239.3 | 224.8 | 250.8 | 183.8 | 269.1 | 113.8 | 225.3 | 215.8 | 236.6 | 178.5 | 254.7 | 112.3 | 209.4 | 204.9 | 220.5 | 171.4 | 238.5 | 108.9 |
| | 85 | 247.2 | 247.2 | 254.8 | 220.2 | 269.2 | 162.3 | 234.8 | 234.8 | 242.3 | 214.3 | 256.5 | 160.1 | 220.6 | 220.6 | 227.9 | 206.5 | 242.0 | 156.0 |
| | 90 | 254.1 | 254.1 | 257.9 | 249.1 | 268.4 | 203.3 | 243.5 | 243.5 | 247.1 | 242.6 | 257.4 | 200.5 | 232.0 | 232.0 | 234.4 | 234.2 | 244.6 | 195.9 |
| 8000 | 75 | 234.7 | 198.7 | 249.1 | 145.7 | 270.3 | 94.6 | 219.1 | 190.5 | 233.3 | 141.2 | 254.3 | 89.0 | 201.5 | 180.4 | 215.6 | 134.8 | 236.4 | 82.7 |
| | 80 | 243.9 | 230.6 | 254.5 | 189.7 | 271.8 | 119.7 | 230.0 | 221.8 | 240.3 | 184.5 | 257.4 | 118.3 | 214.1 | 211.1 | 224.3 | 177.5 | 241.2 | 115.0 |
| | 85 | 252.2 | 252.2 | 258.9 | 226.3 | 272.3 | 168.4 | 239.9 | 239.9 | 246.4 | 220.5 | 259.6 | 166.3 | 225.7 | 225.7 | 232.1 | 212.9 | 245.1 | 162.5 |
| | 90 | 259.5 | 259.5 | 262.3 | 255.5 | 271.9 | 209.7 | 248.9 | 248.9 | 251.5 | 249.2 | 260.9 | 207.0 | 238.9 | 238.9 | 238.9 | 238.9 | 248.1 | 202.5 |
| 8650 | 75 | 238.5 | 204.2 | 251.9 | 151.1 | 272.0 | 95.2 | 222.9 | 196.1 | 236.1 | 146.8 | 256.1 | 89.6 | 205.4 | 186.2 | 218.4 | 140.5 | 238.2 | 83.4 |
| | 80 | 248.1 | 236.4 | 257.6 | 195.4 | 273.9 | 125.4 | 234.1 | 227.7 | 243.5 | 190.4 | 259.6 | 124.1 | 218.3 | 217.1 | 227.5 | 183.6 | 243.5 | 121.0 |
| | 85 | 256.7 | 256.7 | 262.4 | 232.3 | 274.8 | 174.3 | 244.5 | 244.5 | 249.9 | 226.7 | 262.2 | 172.5 | 230.3 | 230.3 | 235.7 | 219.2 | 247.8 | 168.7 |
| | 90 | 264.4 | 264.4 | 266.2 | 261.8 | 274.8 | 215.9 | 255.5 | 255.5 | 255.5 | 255.5 | 263.9 | 213.4 | 242.9 | 242.9 | 242.9 | 242.9 | 251.1 | 209.1 |
| 9300 | 75 | 241.7 | 209.5 | 254.1 | 156.4 | 273.3 | 95.6 | 226.1 | 201.6 | 238.4 | 152.2 | 257.4 | 90.1 | 208.7 | 191.8 | 220.7 | 146.2 | 239.6 | 83.9 |
| | 80 | 251.7 | 242.0 | 260.2 | 201.0 | 275.5 | 130.9 | 237.8 | 233.4 | 246.1 | 196.1 | 261.3 | 129.9 | 222.0 | 222.0 | 230.2 | 189.5 | 245.2 | 126.9 |
| | 85 | 260.7 | 260.7 | 265.3 | 238.1 | 276.8 | 180.2 | 248.5 | 248.5 | 253.0 | 232.7 | 264.2 | 178.5 | 234.4 | 234.4 | 238.7 | 225.4 | 249.8 | 174.9 |
| | 90 | 266.9 | 266.9 | 269.5 | 267.9 | 277.1 | 222.0 | 258.9 | 258.9 | 258.9 | 258.9 | 266.3 | 219.7 | 246.3 | 246.3 | 246.3 | 246.3 | 253.6 | 215.5 |
| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 115 — Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | | 120 — 61 | | 67 | | 73 | | 125 — 61 | | 67 | | 73 | |
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 6700 | 75 | 172.8 | 156.1 | 188.6 | 114.3 | 211.3 | 73.9 | 162.3 | 149.2 | 178.1 | 109.3 | 200.7 | 70.2 | 151.4 | 141.9 | 167.1 | 103.8 | 189.6 | 66.4 |
| | 80 | 186.3 | 185.6 | 198.3 | 155.9 | 217.0 | 97.1 | 176.7 | 176.7 | 188.6 | 150.6 | 207.3 | 93.7 | 166.6 | 166.6 | 178.5 | 144.8 | 197.0 | 89.8 |
| | 85 | 198.9 | 198.9 | 207.0 | 190.1 | 221.9 | 143.4 | 190.1 | 190.1 | 198.1 | 184.5 | 213.0 | 139.7 | 180.9 | 180.9 | 188.8 | 178.4 | 203.6 | 135.4 |
| | 90 | 214.7 | 214.7 | 214.7 | 214.7 | 225.8 | 182.3 | 206.7 | 206.7 | 206.7 | 206.7 | 217.7 | 178.3 | 198.3 | 198.3 | 198.3 | 198.3 | 209.1 | 173.8 |
| 7350 | 75 | 177.7 | 162.3 | 192.6 | 120.5 | 214.2 | 75.0 | 167.3 | 155.5 | 182.1 | 115.5 | 203.6 | 71.3 | 156.4 | 148.3 | 171.1 | 110.2 | 192.6 | 67.4 |
| | 80 | 191.6 | 191.6 | 202.6 | 162.3 | 220.4 | 103.5 | 182.0 | 182.0 | 193.0 | 157.1 | 210.6 | 100.2 | 172.0 | 172.0 | 182.8 | 151.4 | 200.4 | 96.4 |
| | 85 | 204.6 | 204.6 | 211.7 | 196.8 | 225.6 | 150.1 | 195.8 | 195.8 | 202.9 | 191.3 | 216.7 | 146.5 | 186.6 | 186.6 | 193.6 | 185.3 | 207.3 | 142.3 |
| | 90 | 219.8 | 219.8 | 219.8 | 219.8 | 229.9 | 189.3 | 211.9 | 211.9 | 211.9 | 211.9 | 221.8 | 185.3 | 203.4 | 203.4 | 203.4 | 203.4 | 213.3 | 180.9 |
| 8000 | 75 | 182.1 | 168.4 | 196.0 | 126.5 | 216.7 | 75.8 | 171.8 | 161.7 | 185.5 | 121.7 | 206.1 | 72.1 | 160.9 | 154.5 | 174.6 | 116.4 | 195.1 | 68.3 |
| | 80 | 196.4 | 196.4 | 206.4 | 168.7 | 223.2 | 109.9 | 186.9 | 186.9 | 196.8 | 163.5 | 213.5 | 106.6 | 176.9 | 176.9 | 186.7 | 157.9 | 203.3 | 102.8 |
| | 85 | 209.7 | 209.7 | 215.9 | 203.4 | 228.8 | 156.7 | 201.0 | 201.0 | 207.1 | 198.0 | 219.9 | 153.1 | 191.9 | 191.9 | 197.8 | 192.1 | 210.6 | 149.1 |
| | 90 | 224.4 | 224.4 | 224.4 | 224.4 | 233.4 | 196.2 | 216.4 | 216.4 | 216.4 | 216.4 | 225.4 | 192.3 | 208.0 | 208.0 | 208.0 | 208.0 | 216.9 | 187.9 |
| 8650 | 75 | 186.0 | 174.3 | 198.9 | 132.4 | 218.6 | 76.5 | 175.7 | 167.7 | 188.5 | 127.7 | 208.0 | 72.8 | 164.8 | 160.6 | 177.6 | 122.5 | 197.0 | 69.0 |
| | 80 | 200.7 | 200.7 | 209.7 | 174.9 | 225.5 | 116.0 | 191.2 | 191.2 | 200.1 | 169.8 | 215.8 | 112.8 | 181.2 | 181.2 | 190.0 | 164.3 | 205.6 | 109.2 |
| | 85 | 214.4 | 214.4 | 219.5 | 209.9 | 231.4 | 163.1 | 205.7 | 205.7 | 210.8 | 204.5 | 222.6 | 159.6 | 196.6 | 196.6 | 201.5 | 198.7 | 213.3 | 155.7 |
| | 90 | 228.4 | 228.4 | 228.4 | 228.4 | 236.5 | 202.9 | 220.5 | 220.5 | 220.5 | 220.5 | 228.5 | 199.1 | 212.1 | 212.1 | 212.1 | 212.1 | 220.0 | 194.8 |
| 9300 | 75 | 189.4 | 180.1 | 201.3 | 138.2 | 219.9 | 77.0 | 179.1 | 173.6 | 190.9 | 133.6 | 209.4 | 73.3 | 168.3 | 166.6 | 180.0 | 128.4 | 198.5 | 69.5 |
| | 80 | 204.4 | 204.4 | 212.4 | 180.9 | 227.2 | 122.1 | 194.9 | 194.9 | 202.9 | 175.9 | 217.6 | 119.0 | 185.0 | 185.0 | 192.8 | 170.5 | 207.4 | 115.4 |
| | 85 | 218.5 | 218.5 | 222.7 | 216.2 | 233.6 | 169.5 | 209.9 | 209.9 | 213.9 | 210.9 | 224.8 | 166.1 | 204.7 | 204.7 | 204.7 | 204.7 | 215.5 | 162.2 |
| | 90 | 231.9 | 231.9 | 231.9 | 231.9 | 239.0 | 209.5 | 224.0 | 224.0 | 224.0 | 224.0 | 231.0 | 205.8 | 215.7 | 215.7 | 215.7 | 215.7 | 222.6 | 201.6 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 12. Gross cooling capacities WS*155ED, ET (SI)**

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 30 — Entering Wet Bulb Temperature (°C) 16 TGC | 16 SHC | 19 TGC | 19 SHC | 22 TGC | 22 SHC | 35 — 16 TGC | 16 SHC | 19 TGC | 19 SHC | 22 TGC | 22 SHC | 40 — 16 TGC | 16 SHC | 19 TGC | 19 SHC | 22 TGC | 22 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7650 | 24 | 44.4 | 36.8 | 47.8 | 25.6 | 49.0 | 12.5 | 39.5 | 34.6 | 46.8 | 26.1 | 49.0 | 14.0 | 33.5 | 31.8 | 43.6 | 25.3 | 48.1 | 14.7 |
| | 27 | 45.7 | 44.0 | 47.8 | 33.0 | 49.1 | 19.8 | 42.1 | 42.1 | 47.0 | 33.5 | 49.3 | 21.1 | 37.6 | 37.6 | 43.8 | 32.6 | 48.4 | 22.4 |
| | 30 | 47.2 | 47.2 | 48.1 | 40.3 | 49.4 | 27.3 | 45.7 | 45.7 | 47.3 | 41.0 | 49.5 | 28.2 | 42.5 | 42.5 | 44.4 | 40.0 | 48.6 | 29.8 |
| | 33 | 48.5 | 48.5 | 48.6 | 46.3 | 49.3 | 34.0 | 47.9 | 47.9 | 48.1 | 46.7 | 49.7 | 35.6 | 46.3 | 46.3 | 46.5 | 46.4 | 48.9 | 37.0 |
| 8500 | 24 | 45.7 | 39.4 | 48.0 | 26.6 | 49.2 | 11.8 | 41.8 | 37.4 | 47.2 | 27.1 | 49.4 | 12.8 | 35.7 | 34.5 | 44.7 | 26.6 | 48.5 | 14.2 |
| | 27 | 46.7 | 45.8 | 48.2 | 34.6 | 49.4 | 19.7 | 44.2 | 44.2 | 47.5 | 35.4 | 49.6 | 20.7 | 40.9 | 40.9 | 44.9 | 34.9 | 48.8 | 22.5 |
| | 30 | 48.1 | 48.1 | 48.5 | 41.7 | 49.6 | 27.6 | 47.3 | 47.3 | 48.0 | 43.2 | 49.8 | 28.8 | 44.9 | 44.9 | 46.1 | 43.0 | 49.0 | 30.5 |
| | 33 | 49.2 | 49.2 | 48.9 | 47.6 | 49.8 | 34.7 | 48.9 | 48.9 | 48.9 | 48.4 | 49.8 | 37.0 | 47.8 | 47.8 | 47.8 | 47.8 | 49.3 | 38.9 |
| 9350 | 24 | 46.4 | 41.1 | 48.3 | 26.8 | 49.3 | 10.7 | 43.1 | 39.8 | 47.7 | 28.0 | 49.4 | 12.5 | 37.7 | 37.0 | 45.5 | 27.6 | 48.9 | 14.3 |
| | 27 | 47.2 | 46.9 | 48.2 | 34.7 | 49.4 | 18.4 | 46.2 | 46.2 | 48.0 | 37.0 | 49.9 | 21.3 | 42.8 | 42.8 | 45.9 | 37.0 | 49.2 | 23.1 |
| | 30 | 48.3 | 48.6 | 48.8 | 43.3 | 49.9 | 27.8 | 48.1 | 48.1 | 48.4 | 44.6 | 50.0 | 30.3 | 46.8 | 46.8 | 47.1 | 45.0 | 49.4 | 32.3 |
| | 33 | 49.6 | 49.6 | 48.9 | 48.9 | 50.0 | 35.0 | 49.6 | 49.6 | 49.4 | 49.4 | 50.3 | 39.2 | 48.7 | 48.7 | 48.7 | 48.7 | 49.7 | 41.0 |
| 10200 | 24 | 47.1 | 42.7 | 48.4 | 26.6 | 49.4 | 9.0 | 44.5 | 42.2 | 48.0 | 28.5 | 49.8 | 12.4 | 39.6 | 39.4 | 46.1 | 28.7 | 49.2 | 13.8 |
| | 27 | 47.9 | 47.9 | 48.6 | 36.1 | 49.6 | 18.7 | 47.2 | 47.2 | 48.2 | 38.1 | 50.1 | 22.0 | 44.3 | 44.3 | 46.7 | 38.9 | 49.5 | 23.6 |
| | 30 | 49.0 | 49.0 | 48.8 | 45.0 | 49.9 | 27.8 | 48.8 | 48.8 | 48.7 | 45.9 | 50.3 | 31.7 | 47.6 | 47.6 | 47.8 | 46.6 | 49.6 | 33.3 |
| | 33 | 49.8 | 49.8 | 49.5 | 49.5 | 50.0 | 36.1 | 50.1 | 50.1 | 50.1 | 50.1 | 50.5 | 40.6 | 49.4 | 49.4 | 49.4 | 49.4 | 50.1 | 42.5 |

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 45 — Entering Wet Bulb Temperature (°C) 16 TGC | 16 SHC | 19 TGC | 19 SHC | 22 TGC | 22 SHC |
|---|---|---|---|---|---|---|---|
| 7650 | 24 | 28.7 | 28.7 | 37.5 | 22.7 | 45.9 | 14.6 |
| | 27 | 33.3 | 33.3 | 38.1 | 30.4 | 46.1 | 22.0 |
| | 30 | 38.6 | 38.6 | 39.6 | 37.9 | 46.4 | 29.6 |
| | 33 | 43.1 | 43.1 | 43.2 | 43.2 | 46.6 | 36.9 |
| 8500 | 24 | 30.7 | 30.7 | 38.9 | 24.2 | 46.5 | 14.8 |
| | 27 | 36.0 | 36.0 | 39.3 | 32.6 | 46.7 | 22.9 |
| | 30 | 41.3 | 41.3 | 41.8 | 41.1 | 47.0 | 31.3 |
| | 33 | 45.4 | 45.4 | 45.5 | 45.5 | 47.3 | 39.5 |
| 9350 | 24 | 32.6 | 32.6 | 40.3 | 25.7 | 47.0 | 14.7 |
| | 27 | 38.3 | 38.3 | 40.8 | 35.0 | 47.2 | 23.7 |
| | 30 | 43.3 | 43.3 | 43.6 | 43.4 | 47.4 | 32.9 |
| | 33 | 46.9 | 46.9 | 47.0 | 47.0 | 47.7 | 41.6 |
| 10200 | 24 | 34.3 | 34.3 | 41.5 | 27.3 | 47.3 | 14.5 |
| | 27 | 40.1 | 40.1 | 42.3 | 37.4 | 47.6 | 24.7 |
| | 30 | 45.1 | 45.1 | 45.2 | 45.2 | 47.8 | 34.6 |
| | 33 | 47.8 | 47.8 | 47.8 | 47.8 | 48.4 | 43.5 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 13. Gross cooling capacities WS*155ED, ET (IP)**

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 30 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC |
| 7650 | 24 | 151.6 | 125.7 | 163.0 | 87.3 | 167.2 | 42.6 |
| | 27 | 155.8 | 150.2 | 163.1 | 112.5 | 167.6 | 67.6 |
| | 30 | 161.0 | 161.0 | 164.2 | 137.3 | 168.4 | 93.0 |
| | 33 | 165.3 | 165.3 | 165.9 | 157.8 | 168.3 | 115.9 |
| 8500 | 24 | 156.0 | 134.3 | 163.8 | 90.9 | 167.8 | 40.1 |
| | 27 | 159.3 | 156.3 | 164.4 | 117.9 | 168.7 | 67.3 |
| | 30 | 164.0 | 164.0 | 165.4 | 142.2 | 169.3 | 94.2 |
| | 33 | 167.8 | 167.8 | 166.8 | 162.5 | 169.9 | 118.5 |
| 9350 | 24 | 158.3 | 140.1 | 164.6 | 91.3 | 168.2 | 36.6 |
| | 27 | 161.2 | 159.9 | 164.5 | 118.5 | 168.6 | 62.9 |
| | 30 | 164.9 | 165.7 | 166.6 | 147.6 | 170.2 | 95.0 |
| | 33 | 169.2 | 169.2 | 166.8 | 166.8 | 170.6 | 119.4 |
| 10200 | 24 | 160.6 | 145.8 | 165.0 | 90.9 | 168.6 | 30.8 |
| | 27 | 163.4 | 163.4 | 165.9 | 123.0 | 169.4 | 63.8 |
| | 30 | 167.0 | 167.0 | 166.5 | 153.6 | 170.2 | 94.8 |
| | 33 | 169.9 | 169.9 | 169.0 | 169.0 | 170.6 | 123.2 |

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 35 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC |
| 7650 | 24 | 134.7 | 118.0 | 159.6 | 89.1 | 167.3 | 47.9 |
| | 27 | 143.7 | 143.7 | 160.4 | 114.2 | 168.2 | 72.1 |
| | 30 | 155.9 | 155.9 | 161.4 | 139.8 | 168.8 | 96.1 |
| | 33 | 163.5 | 163.5 | 164.2 | 159.2 | 169.6 | 121.4 |
| 8500 | 24 | 142.5 | 127.7 | 161.2 | 92.4 | 168.4 | 43.7 |
| | 27 | 150.7 | 150.7 | 162.2 | 120.6 | 169.2 | 70.8 |
| | 30 | 161.4 | 161.4 | 163.7 | 147.5 | 170.0 | 98.3 |
| | 33 | 166.8 | 166.8 | 166.7 | 165.2 | 170.0 | 126.3 |
| 9350 | 24 | 147.2 | 135.8 | 162.7 | 95.6 | 168.5 | 42.7 |
| | 27 | 157.7 | 157.7 | 163.6 | 126.2 | 170.3 | 72.8 |
| | 30 | 164.1 | 164.1 | 165.2 | 152.1 | 170.7 | 103.3 |
| | 33 | 169.2 | 169.2 | 168.7 | 168.7 | 171.5 | 133.7 |
| 10200 | 24 | 151.9 | 143.8 | 163.6 | 97.2 | 170.1 | 42.4 |
| | 27 | 161.0 | 161.0 | 164.5 | 130.0 | 171.1 | 75.0 |
| | 30 | 166.4 | 166.4 | 166.3 | 156.5 | 171.6 | 108.2 |
| | 33 | 170.9 | 170.9 | 170.9 | 170.9 | 172.2 | 138.4 |

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 40 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC |
| 7650 | 24 | 114.5 | 108.6 | 148.8 | 86.3 | 164.2 | 50.3 |
| | 27 | 128.3 | 128.3 | 149.4 | 111.1 | 165.1 | 76.4 |
| | 30 | 145.0 | 145.0 | 151.6 | 136.6 | 165.8 | 101.6 |
| | 33 | 158.1 | 158.1 | 158.6 | 158.2 | 166.8 | 126.3 |
| 8500 | 24 | 121.7 | 117.6 | 152.4 | 90.8 | 165.5 | 48.6 |
| | 27 | 139.5 | 139.5 | 153.3 | 119.2 | 166.6 | 76.8 |
| | 30 | 153.1 | 153.1 | 157.2 | 146.8 | 167.3 | 104.2 |
| | 33 | 163.1 | 163.1 | 163.2 | 163.2 | 168.2 | 132.9 |
| 9350 | 24 | 128.6 | 126.4 | 155.1 | 94.3 | 167.0 | 48.9 |
| | 27 | 145.9 | 145.9 | 156.7 | 126.1 | 167.8 | 78.9 |
| | 30 | 159.5 | 159.5 | 160.8 | 153.6 | 168.4 | 110.2 |
| | 33 | 166.1 | 166.1 | 166.2 | 166.2 | 169.7 | 139.7 |
| 10200 | 24 | 135.1 | 134.3 | 157.4 | 97.9 | 168.0 | 46.9 |
| | 27 | 151.1 | 151.1 | 159.3 | 132.6 | 168.8 | 80.7 |
| | 30 | 162.5 | 162.5 | 163.2 | 158.9 | 169.3 | 113.6 |
| | 33 | 168.5 | 168.5 | 168.6 | 168.6 | 171.0 | 144.9 |

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 45 — Entering Wet Bulb Temperature (°C) 16 | | 19 | | 22 | |
|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC |
| 7650 | 24 | 97.9 | 97.9 | 127.9 | 77.6 | 156.5 | 49.9 |
| | 27 | 113.7 | 113.7 | 129.9 | 103.7 | 157.4 | 75.2 |
| | 30 | 131.6 | 131.6 | 135.1 | 129.4 | 158.3 | 100.9 |
| | 33 | 147.1 | 147.1 | 147.3 | 147.3 | 159.1 | 126.0 |
| 8500 | 24 | 104.7 | 104.7 | 132.8 | 82.6 | 158.6 | 50.6 |
| | 27 | 122.7 | 122.7 | 134.0 | 111.3 | 159.3 | 78.2 |
| | 30 | 141.0 | 141.0 | 142.7 | 140.1 | 160.2 | 106.9 |
| | 33 | 155.0 | 155.0 | 155.4 | 155.4 | 161.4 | 134.9 |
| 9350 | 24 | 111.2 | 111.2 | 137.4 | 87.6 | 160.2 | 50.2 |
| | 27 | 130.8 | 130.8 | 139.0 | 119.5 | 161.0 | 81.0 |
| | 30 | 147.9 | 147.9 | 148.7 | 148.0 | 161.8 | 112.4 |
| | 33 | 160.0 | 160.0 | 160.3 | 160.3 | 162.8 | 142.1 |
| 10200 | 24 | 117.2 | 117.2 | 141.7 | 93.3 | 161.4 | 49.4 |
| | 27 | 136.7 | 136.7 | 144.2 | 127.5 | 162.3 | 84.1 |
| | 30 | 153.7 | 153.7 | 154.1 | 154.1 | 163.2 | 118.0 |
| | 33 | 163.2 | 163.2 | 163.1 | 163.1 | 165.2 | 148.4 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 14. Gross cooling capacities WS*200ED, ET (SI)**

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 30 — Entering Wet Bulb Temperature (°C) 16 TGC | 16 SHC | 19 TGC | 19 SHC | 22 TGC | 22 SHC | 35 — 16 TGC | 16 SHC | 19 TGC | 19 SHC | 22 TGC | 22 SHC | 40 — 16 TGC | 16 SHC | 19 TGC | 19 SHC | 22 TGC | 22 SHC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10100 | 24 | 56.4 | 47.3 | 67.8 | 36.0 | 74.3 | 20.5 | 49.7 | 44.6 | 62.9 | 34.5 | 71.1 | 20.2 | 43.6 | 42.2 | 57.0 | 32.5 | 66.8 | 19.5 |
| | 27 | 58.0 | 57.4 | 68.2 | 45.9 | 75.1 | 30.6 | 52.9 | 52.9 | 63.4 | 44.4 | 71.6 | 30.2 | 48.7 | 48.7 | 57.4 | 42.4 | 67.2 | 29.5 |
| | 30 | 62.9 | 62.9 | 68.9 | 56.0 | 76.0 | 40.9 | 59.2 | 59.2 | 64.3 | 54.5 | 72.4 | 40.5 | 55.3 | 55.3 | 58.2 | 52.6 | 67.7 | 39.6 |
| | 33 | 68.4 | 68.4 | 70.0 | 66.3 | 76.9 | 51.2 | 64.9 | 64.9 | 65.8 | 64.8 | 73.0 | 50.8 | 60.7 | 60.7 | 60.8 | 60.8 | 68.3 | 49.8 |
| 11220 | 24 | 59.1 | 50.7 | 69.3 | 37.3 | 75.3 | 19.9 | 52.4 | 48.2 | 65.0 | 36.0 | 72.0 | 19.4 | 46.1 | 45.5 | 58.7 | 34.2 | 67.9 | 18.8 |
| | 27 | 61.0 | 61.0 | 69.9 | 48.4 | 76.1 | 30.9 | 56.8 | 56.8 | 65.4 | 47.1 | 72.7 | 30.7 | 52.4 | 52.4 | 59.3 | 45.2 | 68.4 | 30.2 |
| | 30 | 66.9 | 66.9 | 70.7 | 59.6 | 77.1 | 42.3 | 62.6 | 62.6 | 66.3 | 58.3 | 73.6 | 42.1 | 58.5 | 58.5 | 60.3 | 56.6 | 69.1 | 41.5 |
| | 33 | 71.5 | 71.5 | 72.3 | 70.8 | 78.2 | 53.7 | 68.1 | 68.1 | 68.3 | 68.2 | 74.5 | 53.5 | 64.3 | 64.3 | 64.4 | 64.4 | 69.9 | 52.9 |
| 12340 | 24 | 61.1 | 53.9 | 70.6 | 38.4 | 75.7 | 18.7 | 55.0 | 51.6 | 66.2 | 37.3 | 72.7 | 18.7 | 48.3 | 48.2 | 60.5 | 35.8 | 68.7 | 18.6 |
| | 27 | 63.8 | 63.8 | 71.3 | 50.7 | 76.9 | 31.3 | 59.8 | 59.8 | 66.9 | 49.6 | 73.6 | 31.4 | 55.4 | 55.4 | 61.2 | 48.0 | 69.4 | 31.0 |
| | 30 | 69.5 | 69.5 | 72.3 | 63.1 | 78.0 | 43.8 | 65.9 | 65.9 | 67.9 | 62.0 | 74.5 | 43.7 | 61.4 | 61.4 | 63.0 | 60.6 | 70.2 | 43.3 |
| | 33 | 74.1 | 74.1 | 74.4 | 74.1 | 79.2 | 56.4 | 70.6 | 70.6 | 70.8 | 70.8 | 75.7 | 56.3 | 66.8 | 66.8 | 66.9 | 66.9 | 71.2 | 55.9 |
| 13460 | 24 | 62.8 | 57.0 | 71.6 | 39.6 | 76.3 | 18.3 | 57.3 | 54.9 | 67.3 | 38.7 | 73.3 | 18.5 | 50.7 | 50.7 | 62.1 | 37.4 | 69.3 | 18.2 |
| | 27 | 66.8 | 66.8 | 72.5 | 53.0 | 77.4 | 31.8 | 62.2 | 62.2 | 68.0 | 52.1 | 74.3 | 31.9 | 57.8 | 57.8 | 63.0 | 50.8 | 70.2 | 31.8 |
| | 30 | 71.6 | 71.6 | 73.7 | 66.4 | 78.7 | 45.3 | 68.0 | 68.0 | 69.4 | 65.5 | 75.4 | 45.4 | 64.1 | 64.1 | 64.6 | 63.8 | 71.0 | 45.2 |
| | 33 | 76.2 | 76.2 | 76.3 | 76.3 | 80.0 | 58.7 | 72.8 | 72.8 | 72.9 | 72.9 | 76.7 | 59.0 | 68.9 | 68.9 | 69.0 | 69.0 | 72.2 | 59.0 |

| Airflow $m^3/h$ | Enter DB (°C) | Ambient Temperature (°C) 45 — Entering Wet Bulb Temperature (°C) 16 TGC | 16 SHC | 19 TGC | 19 SHC | 22 TGC | 22 SHC |
|---|---|---|---|---|---|---|---|
| 10100 | 24 | 38.3 | 38.3 | 50.6 | 30.4 | 61.7 | 18.2 |
| | 27 | 44.5 | 44.5 | 51.1 | 40.4 | 62.0 | 28.2 |
| | 30 | 51.0 | 51.0 | 52.4 | 50.7 | 62.4 | 38.3 |
| | 33 | 56.5 | 56.5 | 56.6 | 56.6 | 62.9 | 48.5 |
| 11220 | 24 | 41.0 | 41.0 | 52.6 | 32.2 | 62.8 | 18.3 |
| | 27 | 47.7 | 47.7 | 53.1 | 43.3 | 63.2 | 29.2 |
| | 30 | 54.2 | 54.2 | 54.7 | 54.3 | 63.7 | 40.4 |
| | 33 | 59.9 | 59.9 | 60.0 | 60.0 | 64.4 | 51.8 |
| 12340 | 24 | 43.2 | 43.2 | 54.0 | 33.9 | 63.7 | 17.9 |
| | 27 | 50.6 | 50.6 | 54.7 | 46.1 | 64.2 | 30.3 |
| | 30 | 56.6 | 56.6 | 56.8 | 56.8 | 64.8 | 42.6 |
| | 33 | 62.5 | 62.5 | 62.6 | 62.6 | 65.7 | 55.1 |
| 13460 | 24 | 45.6 | 45.6 | 55.1 | 35.5 | 64.4 | 17.6 |
| | 27 | 53.1 | 53.1 | 55.9 | 48.8 | 65.0 | 31.1 |
| | 30 | 59.3 | 59.3 | 59.4 | 59.4 | 65.7 | 44.6 |
| | 33 | 64.5 | 64.5 | 64.6 | 64.6 | 66.8 | 58.4 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 15. Gross cooling capacities WS*200ED, ET (IP)**

| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 85 — Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | | 95 — 61 | | 67 | | 73 | | 105 — 61 | | 67 | | 73 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC | TGC | SHC |
| 5950 | 75 | 192.6 | 161.3 | 231.2 | 122.7 | 253.7 | 69.8 | 169.6 | 152.2 | 214.6 | 117.5 | 242.5 | 68.8 | 148.6 | 144.0 | 194.5 | 110.8 | 227.9 | 66.4 |
| | 80 | 197.9 | 195.8 | 232.5 | 156.5 | 256.4 | 104.5 | 180.6 | 180.6 | 216.3 | 151.4 | 244.4 | 102.9 | 166.2 | 166.2 | 196.0 | 144.8 | 229.2 | 100.7 |
| | 85 | 214.5 | 214.5 | 235.0 | 191.1 | 259.3 | 139.6 | 202.0 | 202.0 | 219.3 | 186.1 | 246.9 | 138.0 | 188.6 | 188.6 | 198.6 | 179.4 | 231.1 | 135.1 |
| | 90 | 233.2 | 233.2 | 238.7 | 226.2 | 262.4 | 174.5 | 221.5 | 221.5 | 224.5 | 221.1 | 249.1 | 173.3 | 207.0 | 207.0 | 207.4 | 207.4 | 233.1 | 169.8 |
| 6600 | 75 | 201.8 | 173.1 | 236.6 | 127.1 | 256.8 | 67.7 | 178.9 | 164.4 | 221.7 | 122.9 | 245.6 | 66.1 | 157.2 | 155.3 | 200.4 | 116.5 | 231.6 | 64.3 |
| | 80 | 208.3 | 208.1 | 238.5 | 165.0 | 259.7 | 105.4 | 193.9 | 193.9 | 223.3 | 160.7 | 248.1 | 104.9 | 178.6 | 178.6 | 202.4 | 154.3 | 233.4 | 103.1 |
| | 85 | 228.3 | 228.3 | 241.2 | 203.4 | 263.2 | 144.2 | 213.7 | 213.7 | 226.1 | 199.0 | 251.1 | 143.8 | 199.6 | 199.6 | 205.9 | 193.0 | 235.8 | 141.6 |
| | 90 | 243.8 | 243.8 | 246.8 | 241.7 | 266.9 | 183.2 | 232.3 | 232.3 | 232.9 | 232.7 | 254.1 | 182.7 | 219.3 | 219.3 | 219.8 | 219.8 | 238.6 | 180.6 |
| 7250 | 75 | 208.5 | 183.9 | 240.9 | 131.1 | 258.3 | 63.7 | 187.6 | 176.1 | 225.8 | 127.4 | 248.0 | 63.9 | 164.9 | 164.6 | 206.3 | 122.2 | 234.5 | 63.5 |
| | 80 | 217.7 | 217.7 | 243.1 | 173.0 | 262.3 | 106.7 | 203.9 | 203.9 | 228.1 | 169.3 | 251.2 | 107.1 | 189.0 | 189.0 | 208.9 | 163.9 | 236.8 | 105.8 |
| | 85 | 237.1 | 237.1 | 246.7 | 215.1 | 266.2 | 149.4 | 224.9 | 224.9 | 231.5 | 211.6 | 254.3 | 149.1 | 209.5 | 209.5 | 214.9 | 206.7 | 239.4 | 147.8 |
| | 90 | 252.8 | 252.8 | 253.7 | 252.8 | 270.4 | 192.3 | 240.9 | 240.9 | 241.5 | 241.5 | 258.3 | 192.1 | 227.8 | 227.8 | 228.2 | 228.2 | 242.8 | 190.7 |
| 7900 | 75 | 214.3 | 194.4 | 244.2 | 135.0 | 260.2 | 62.3 | 195.5 | 187.3 | 229.5 | 132.1 | 250.0 | 63.3 | 172.9 | 172.9 | 212.0 | 127.7 | 236.5 | 62.1 |
| | 80 | 228.0 | 228.0 | 247.2 | 180.8 | 264.0 | 108.3 | 212.4 | 212.4 | 232.1 | 177.7 | 253.5 | 108.9 | 197.2 | 197.2 | 214.9 | 173.2 | 239.4 | 108.6 |
| | 85 | 244.4 | 244.4 | 251.4 | 226.6 | 268.3 | 154.5 | 232.0 | 232.0 | 236.6 | 223.6 | 257.1 | 154.8 | 218.8 | 218.8 | 220.6 | 217.8 | 242.4 | 154.2 |
| | 90 | 259.9 | 259.9 | 260.4 | 260.4 | 272.9 | 200.3 | 248.4 | 248.4 | 248.6 | 248.6 | 261.5 | 201.3 | 235.2 | 235.2 | 235.5 | 235.5 | 246.4 | 201.3 |

| Airflow CFM | Enter DB (°F) | Ambient Temperature (°F) 115 — Entering Wet Bulb Temperature (°F) 61 | | 67 | | 73 | |
|---|---|---|---|---|---|---|---|
| | | TGC | SHC | TGC | SHC | TGC | SHC |
| 5950 | 75 | 130.5 | 130.5 | 172.8 | 103.7 | 210.4 | 62.2 |
| | 80 | 152.0 | 152.0 | 174.4 | 137.7 | 211.4 | 96.3 |
| | 85 | 173.9 | 173.9 | 178.7 | 173.0 | 212.8 | 130.6 |
| | 90 | 192.8 | 192.8 | 193.1 | 193.1 | 214.8 | 165.5 |
| 6600 | 75 | 139.9 | 139.9 | 179.4 | 109.9 | 214.3 | 62.3 |
| | 80 | 162.7 | 162.7 | 181.3 | 147.7 | 215.7 | 99.8 |
| | 85 | 184.8 | 184.8 | 186.6 | 185.3 | 217.2 | 137.9 |
| | 90 | 204.4 | 204.4 | 204.8 | 204.8 | 219.6 | 176.8 |
| 7250 | 75 | 147.4 | 147.4 | 184.2 | 115.6 | 217.2 | 61.2 |
| | 80 | 172.5 | 172.5 | 186.5 | 157.3 | 219.0 | 103.3 |
| | 85 | 193.3 | 193.3 | 193.9 | 193.9 | 221.1 | 145.3 |
| | 90 | 213.1 | 213.1 | 213.5 | 213.5 | 224.0 | 188.0 |
| 7900 | 75 | 155.5 | 155.5 | 188.1 | 121.1 | 219.7 | 60.1 |
| | 80 | 181.1 | 181.1 | 190.7 | 166.6 | 221.7 | 106.0 |
| | 85 | 202.2 | 202.2 | 202.8 | 202.8 | 224.3 | 152.3 |
| | 90 | 219.9 | 219.9 | 220.3 | 220.3 | 227.8 | 199.1 |

**Notes:**
1. All capacities shown are gross and have not considered indoor fan heat.
2. TGC = Total gross capacity (kW)
3. SHC = Sensible heat capacity (kW)

**Table 16. WS*155ED, ET net heating capacities (kW)—8500 $m^3/h$—(SI)**

| Outdoor Temp (°C) | Peak Net Heating (kW) at Indicated Dry Bulb (°C) | | | | Peak Total Power (kW) at Indicated Dry Bulb (°C) | | | |
|---|---|---|---|---|---|---|---|---|
| 70% RH | 15 | 21 | 24 | 27 | 15 | 21 | 24 | 27 |
| -24 | 13.8 | 13.4 | 13.2 | 13.0 | 10.5 | 11.5 | 12.0 | 12.5 |
| -21 | 15.3 | 14.9 | 14.7 | 14.5 | 10.7 | 11.7 | 12.1 | 12.7 |
| -18 | 17.0 | 16.5 | 16.3 | 16.0 | 10.9 | 11.8 | 12.4 | 12.9 |
| -15 | 18.6 | 17.4 | 17.1 | 17.3 | 11.1 | 12.0 | 12.5 | 14.0 |
| -12 | 20.2 | 17.8 | 18.8 | 18.8 | 12.0 | 12.1 | 12.7 | 13.7 |
| -9 | 21.5 | 20.9 | 20.5 | 20.2 | 11.4 | 12.4 | 12.9 | 13.5 |
| -6 | 23.4 | 22.7 | 22.3 | 21.9 | 11.6 | 12.5 | 13.1 | 13.7 |
| -3 | 25.4 | 24.6 | 24.2 | 23.8 | 11.8 | 12.7 | 13.3 | 13.9 |
| 0 | 27.4 | 26.6 | 26.2 | 25.8 | 11.9 | 13.0 | 13.5 | 14.1 |
| 3 | 29.5 | 28.6 | 28.2 | 27.8 | 12.1 | 13.2 | 13.8 | 14.4 |
| 6 | 36.1 | 35.1 | 34.5 | 34.0 | 12.2 | 13.3 | 13.9 | 14.5 |
| 9 | 43.8 | 42.4 | 41.7 | 41.0 | 12.6 | 13.6 | 14.2 | 14.8 |
| 12 | 46.6 | 45.3 | 44.5 | 43.7 | 12.8 | 13.9 | 14.4 | 15.0 |
| 15 | 49.8 | 48.3 | 47.4 | 46.8 | 13.1 | 14.1 | 14.7 | 15.3 |
| 18 | 53.2 | 51.4 | 50.7 | 49.8 | 13.4 | 14.4 | 15.0 | 15.6 |
| 21 | 57.0 | 55.1 | 54.0 | 53.0 | 13.7 | 14.8 | 15.4 | 16.0 |
| 24 | 60.5 | 58.6 | 57.5 | 56.5 | 14.1 | 15.2 | 15.8 | 16.4 |

**Notes:**
1. For other airflow conditions, see heating capacity correction factor
2. Net Heating Capacity and Power Input include indoor fan heat at nominal cfm and 0.35 inch ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
3. Heating capacities and powers are integrated to include the effects of defrost in the frost region.

**Table 17. WS*155ED, ET net heating capacities (MBh)—5000 cfm (IP)**

| Outdoor Temp (°F) | Peak Net Heating (MBh) at Indicated Dry Bulb (°F) | | | | Peak Total Power (kW) at Indicated Dry Bulb (°F) | | | |
|---|---|---|---|---|---|---|---|---|
| 70% RH | 60 | 70 | 75 | 80 | 60 | 70 | 75 | 80 |
| -8 | 46.9 | 45.7 | 45.0 | 44.4 | 10.5 | 11.5 | 12.0 | 12.5 |
| -3 | 52.4 | 51.0 | 50.2 | 49.5 | 10.7 | 11.7 | 12.1 | 12.7 |
| 2 | 57.9 | 56.3 | 55.5 | 54.7 | 10.9 | 11.8 | 12.4 | 12.9 |
| 7 | 63.5 | 59.2 | 58.2 | 59.0 | 11.1 | 12.0 | 12.5 | 14.0 |
| 12 | 69.0 | 60.9 | 64.1 | 64.1 | 12.0 | 12.1 | 12.7 | 13.7 |
| 17 | 73.5 | 71.2 | 70.0 | 68.9 | 11.4 | 12.4 | 12.9 | 13.5 |
| 22 | 79.9 | 77.3 | 76.1 | 74.9 | 11.6 | 12.5 | 13.1 | 13.7 |
| 27 | 86.5 | 83.8 | 82.4 | 81.1 | 11.8 | 12.7 | 13.3 | 13.9 |
| 32 | 93.6 | 90.8 | 89.2 | 87.9 | 11.9 | 13.0 | 13.5 | 14.1 |
| 37 | 100.6 | 97.5 | 96.2 | 94.7 | 12.1 | 13.2 | 13.8 | 14.4 |
| 42 | 123.3 | 119.7 | 117.8 | 116.0 | 12.2 | 13.3 | 13.9 | 14.5 |
| 47 | 149.3 | 144.8 | 142.4 | 140.0 | 12.6 | 13.6 | 14.2 | 14.8 |
| 52 | 159.0 | 154.4 | 151.9 | 149.2 | 12.8 | 13.9 | 14.4 | 15.0 |
| 57 | 170.0 | 164.7 | 161.8 | 159.6 | 13.1 | 14.1 | 14.7 | 15.3 |
| 62 | 181.5 | 175.5 | 172.9 | 169.7 | 13.4 | 14.4 | 15.0 | 15.6 |
| 67 | 194.6 | 187.9 | 184.2 | 180.8 | 13.7 | 14.8 | 15.4 | 16.0 |
| 72 | 206.5 | 199.8 | 196.2 | 192.6 | 14.1 | 15.2 | 15.8 | 16.4 |

**Notes:**
1. For other airflow conditions, see heating capacity correction factor
2. Net Heating Capacity and Power Input include indoor fan heat at nominal cfm and 0.35 inch ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
3. Heating capacities and powers are integrated to include the effects of defrost in the frost region.

**Table 18. WS*200ED, ET net heating capacities (kW)—11210 $m^3/h$—(SI)**

| Outdoor Temp (°C) | Peak Net Heating (kW) at Indicated Dry Bulb (°C) | | | | Peak Total Power (kW) at Indicated Dry Bulb (°C) | | | |
|---|---|---|---|---|---|---|---|---|
| 70% RH | 15 | 21 | 24 | 27 | 15 | 21 | 24 | 27 |
| -24 | 21.3 | 20.7 | 20.5 | 20.3 | 15.1 | 15.9 | 16.4 | 16.9 |
| -21 | 23.1 | 22.5 | 22.3 | 22.0 | 15.3 | 16.0 | 16.5 | 17.0 |
| -18 | 25.4 | 24.8 | 24.5 | 24.2 | 15.4 | 16.2 | 16.7 | 17.2 |
| -15 | 28.0 | 27.2 | 27.0 | 26.6 | 15.5 | 16.3 | 16.8 | 17.3 |
| -12 | 31.2 | 30.7 | 30.5 | 30.3 | 15.7 | 16.5 | 17.0 | 17.5 |
| -9 | 34.6 | 33.8 | 33.6 | 33.3 | 15.9 | 16.7 | 17.2 | 17.7 |
| -6 | 37.7 | 37.0 | 36.6 | 36.2 | 16.1 | 16.9 | 17.4 | 17.9 |
| -3 | 40.7 | 39.9 | 39.6 | 39.2 | 16.4 | 17.3 | 17.8 | 18.3 |
| 0 | 43.7 | 42.8 | 42.5 | 42.1 | 16.5 | 17.4 | 17.9 | 18.4 |
| 3 | 47.7 | 46.8 | 46.3 | 46.0 | 16.8 | 17.7 | 18.2 | 18.7 |
| 6 | 51.8 | 50.6 | 50.1 | 49.6 | 17.0 | 17.9 | 18.4 | 18.9 |
| 9 | 56.3 | 55.2 | 54.6 | 54.2 | 17.1 | 18.0 | 18.5 | 19.0 |
| 12 | 60.4 | 59.1 | 58.4 | 58.0 | 17.4 | 18.3 | 18.8 | 19.3 |
| 15 | 64.2 | 62.7 | 62.1 | 61.5 | 17.8 | 18.8 | 19.3 | 19.8 |
| 18 | 69.1 | 67.5 | 66.6 | 65.9 | 20.0 | 21.1 | 21.6 | 22.1 |
| 21 | 73.8 | 71.8 | 70.9 | 70.0 | 20.1 | 21.2 | 21.7 | 22.2 |
| 24 | 78.7 | 76.8 | 75.9 | 74.9 | 20.4 | 21.5 | 22.0 | 22.6 |

**Notes:**
1. For other airflow conditions, see heating capacity correction factor
2. Net Heating Capacity and Power Input include indoor fan heat at nominal cfm and 0.35 inch ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
3. Heating capacities and powers are integrated to include the effects of defrost in the frost region.

**Table 19. WS*200ED, ET net heating capacities (MBh)—6600 cfm (IP)**

| Outdoor Temp (°F) | Peak Net Heating (MBh) at Indicated Dry Bulb (°F) | | | | Peak Total Power (kW) at Indicated Dry Bulb (°F) | | | |
|---|---|---|---|---|---|---|---|---|
| 70% RH | 60 | 70 | 75 | 80 | 60 | 70 | 75 | 80 |
| -8 | 72.5 | 70.6 | 69.8 | 69.1 | 15.1 | 15.9 | 16.4 | 16.9 |
| -3 | 78.8 | 76.8 | 76.1 | 75.1 | 15.3 | 16.0 | 16.5 | 17.0 |
| 2 | 86.7 | 84.5 | 83.5 | 82.5 | 15.4 | 16.2 | 16.7 | 17.2 |
| 7 | 95.4 | 92.9 | 92.1 | 90.9 | 15.5 | 16.3 | 16.8 | 17.3 |
| 12 | 106.5 | 104.6 | 104.0 | 103.2 | 15.7 | 16.5 | 17.0 | 17.5 |
| 17 | 118.0 | 115.4 | 114.7 | 113.7 | 15.9 | 16.7 | 17.2 | 17.7 |
| 22 | 128.6 | 126.3 | 124.9 | 123.5 | 16.1 | 16.9 | 17.4 | 17.9 |
| 27 | 138.7 | 136.2 | 135.0 | 133.7 | 16.4 | 17.3 | 17.8 | 18.3 |
| 32 | 149.0 | 146.2 | 145.1 | 143.6 | 16.5 | 17.4 | 17.9 | 18.4 |
| 37 | 162.8 | 159.8 | 158.1 | 157.1 | 16.8 | 17.7 | 18.2 | 18.7 |
| 42 | 176.9 | 172.7 | 170.8 | 169.4 | 17.0 | 17.9 | 18.4 | 18.9 |
| 47 | 192.0 | 188.2 | 186.3 | 184.9 | 17.1 | 18.0 | 18.5 | 19.0 |
| 52 | 206.0 | 201.8 | 199.3 | 197.8 | 17.4 | 18.3 | 18.8 | 19.3 |
| 57 | 219.1 | 213.9 | 212.0 | 209.7 | 17.8 | 18.8 | 19.3 | 19.8 |
| 62 | 235.7 | 230.1 | 227.3 | 225.0 | 20.0 | 21.1 | 21.6 | 22.1 |
| 67 | 251.6 | 244.8 | 242.0 | 238.8 | 20.1 | 21.2 | 21.7 | 22.2 |
| 72 | 268.7 | 262.0 | 259.1 | 255.4 | 20.4 | 21.5 | 22.0 | 22.6 |

**Notes:**
1. For other airflow conditions, see heating capacity correction factor
2. Net Heating Capacity and Power Input include indoor fan heat at nominal cfm and 0.35 inch ESP. To obtain net heating at other conditions, subtract fan heat at this condition and add fan heat at new condition.
3. Heating capacities and powers are integrated to include the effects of defrost in the frost region.

### Table 20. Evaporator fan performance TS*155F downflow or horizontal (SI)

| | External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| $m^3/h$ | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 1.49 Nom kW Standard Motor & Low Static Drive Accessory | | | | | | | | | | 1.49 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | | | |
| 7140 | — | — | 393 | 0.46 | 430 | 0.54 | 467 | 0.64 | 503 | 0.74 | 536 | 0.84 | 570 | 0.95 | 601 | 1.06 | 630 | 1.18 | 659 | 1.31 |
| 7820 | 376 | 0.48 | 416 | 0.58 | 451 | 0.66 | 484 | 0.75 | 518 | 0.86 | 551 | 0.97 | 581 | 1.08 | 612 | 1.20 | 642 | 1.32 | 669 | 1.45 |
| 8500 | 400 | 0.60 | 440 | 0.70 | 473 | 0.80 | 504 | 0.89 | 534 | 1.00 | 566 | 1.12 | 597 | 1.24 | 625 | 1.35 | 653 | 1.48 | 681 | 1.61 |
| 9180 | 425 | 0.73 | 464 | 0.85 | 496 | 0.96 | 525 | 1.06 | 554 | 1.16 | 582 | 1.28 | 611 | 1.41 | 640 | 1.54 | 666 | 1.66 | 692 | 1.79 |
| 9860 | 450 | 0.89 | 488 | 1.01 | 520 | 1.14 | 548 | 1.24 | 575 | 1.35 | 601 | 1.47 | 627 | 1.59 | 654 | 1.73 | 681 | 1.87 | 707 | 2.01 |
| | | | 1.49 Nom kw Standard Motor Drive | | | | | | | | | | | 2.24 Nom kw Oversized Motor & Drive | | | | | | |

**Continued**

| | External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| $m^3/h$ | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 1.49 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | | | | 2.24 Nom kw Oversized Motor & Drive | | | | | | | | | |
| 7140 | 686 | 1.44 | 713 | 1.56 | 738 | 1.69 | 763 | 1.82 | 786 | 1.95 | 809 | 2.08 | 831 | 2.21 | 852 | 2.34 | — | — | — | — |
| 7820 | 696 | 1.58 | 722 | 1.72 | 747 | 1.86 | 771 | 2.00 | 795 | 2.14 | 818 | 2.28 | 840 | 2.42 | — | — | — | — | — | — |
| 8500 | 707 | 1.75 | 732 | 1.88 | 757 | 2.03 | 780 | 2.18 | 804 | 2.33 | 826 | 2.49 | — | — | — | — | — | — | — | — |
| 9180 | 718 | 1.93 | 744 | 2.08 | 768 | 2.22 | 791 | 2.37 | 813 | 2.53 | — | — | — | — | — | — | — | — | — | — |
| 9860 | 730 | 2.14 | 754 | 2.29 | 779 | 2.44 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

**Note:** Data includes pressure drop for filters and wet coil.

### Table 21. Evaporator fan performance TS*155F downflow or horizontal (IP)

| | External Static Pressure (Inches of Water Pressure) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 2HP Standard Motor & Low Static Drive Accessory | | | | | | | | | | 2HP Standard Motor & High Static Drive Accessory | | | | | | | | | |
| 4000 | — | — | 382 | 0.56 | 420 | 0.66 | 459 | 0.79 | 496 | 0.91 | 531 | 1.05 | 564 | 1.19 | 595 | 1.34 | 625 | 1.50 | 654 | 1.67 |
| 4500 | — | — | 410 | 0.73 | 446 | 0.85 | 479 | 0.97 | 514 | 1.11 | 548 | 1.26 | 578 | 1.40 | 610 | 1.56 | 639 | 1.72 | 666 | 1.89 |
| 5000 | 400 | 0.80 | 440 | 0.95 | 473 | 1.07 | 504 | 1.20 | 534 | 1.34 | 566 | 1.50 | 597 | 1.66 | 625 | 1.81 | 653 | 1.98 | 681 | 2.16 |
| 5500 | 431 | 1.03 | 470 | 1.19 | 502 | 1.34 | 531 | 1.48 | 559 | 1.62 | 586 | 1.77 | 615 | 1.95 | 643 | 2.12 | 670 | 2.30 | 695 | 2.47 |
| 6000 | 463 | 1.30 | 500 | 1.48 | 531 | 1.65 | 559 | 1.80 | 585 | 1.95 | 611 | 2.11 | 636 | 2.28 | 662 | 2.46 | 689 | 2.66 | 714 | 2.85 |
| | | | 2HP Standard Motor Drive | | | | | | | | | | | 3HP Oversized Motor & Drive | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water Pressure) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 2HP Standard Motor & High Static Drive Accessory | | | | | | | | | | 3HP Oversized Motor & Drive | | | | | | | | | |
| 4000 | 682 | 1.83 | 708 | 1.99 | 734 | 2.16 | 758 | 2.32 | 782 | 2.49 | 804 | 2.66 | 826 | 2.83 | 847 | 3.01 | — | — | — | — |
| 4500 | 693 | 2.07 | 719 | 2.25 | 745 | 2.44 | 769 | 2.62 | 793 | 2.80 | 815 | 2.99 | 838 | 3.17 | — | — | — | — | — | — |
| 5000 | 707 | 2.34 | 732 | 2.53 | 757 | 2.72 | 780 | 2.92 | 804 | 3.13 | 826 | 3.33 | — | — | — | — | — | — | — | — |
| 5500 | 721 | 2.66 | 747 | 2.86 | 771 | 3.05 | 794 | 3.26 | — | — | — | — | — | — | — | — | — | — | — | — |
| 6000 | 738 | 3.04 | 760 | 3.22 | 784 | 3.43 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

**Note:** Data includes pressure drop for filters and wet coil.

### Table 22. Evaporator fan performance TS*175F downflow or horizontal (SI)

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kw Standard Motor & Low Static Drive Accessory | | | | | | | | | | 2.24 Nom kw Standard Motor Drive | | | | | | | | | |
| 7985 | — | — | 429 | 0.62 | 463 | 0.71 | 496 | 0.81 | 529 | 0.92 | 562 | 1.03 | 592 | 1.14 | 622 | 1.26 | 652 | 1.39 | 679 | 1.52 |
| 8750 | 419 | 0.67 | 457 | 0.78 | 489 | 0.88 | 520 | 0.98 | 549 | 1.09 | 580 | 1.21 | 610 | 1.33 | 638 | 1.45 | 665 | 1.58 | 693 | 1.72 |
| 9515 | 449 | 0.84 | 485 | 0.96 | 516 | 1.07 | 545 | 1.18 | 572 | 1.29 | 599 | 1.41 | 628 | 1.54 | 656 | 1.68 | 682 | 1.81 | 707 | 1.94 |
| 10280 | 478 | 1.04 | 513 | 1.17 | 544 | 1.30 | 571 | 1.41 | 597 | 1.52 | 623 | 1.64 | 648 | 1.77 | 674 | 1.92 | 700 | 2.07 | 725 | 2.21 |
| 11045 | 508 | 1.26 | 542 | 1.40 | 572 | 1.55 | 598 | 1.67 | 623 | 1.79 | 647 | 1.92 | 671 | 2.05 | 694 | 2.19 | 718 | 2.34 | 743 | 2.50 |
| | | | | | | | | | 2.24 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | | | | | |

**Continued**

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 7985 | 705 | 1.65 | 731 | 1.79 | 756 | 1.94 | 780 | 2.09 | 803 | 2.23 | 826 | 2.37 | 848 | 2.52 | 870 | 2.66 | 890 | 2.81 | 910 | 2.95 |
| 8750 | 719 | 1.86 | 744 | 2.00 | 768 | 2.14 | 792 | 2.30 | 815 | 2.45 | 837 | 2.61 | 859 | 2.77 | 880 | 2.93 | 901 | 3.09 | 921 | 3.25 |
| 9515 | 732 | 2.08 | 758 | 2.23 | 782 | 2.39 | 805 | 2.54 | 827 | 2.70 | 849 | 2.86 | 870 | 3.03 | 891 | 3.20 | 912 | 3.37 | 932 | 3.55 |
| 10280 | 749 | 2.35 | 771 | 2.49 | 795 | 2.65 | 819 | 2.82 | 841 | 2.98 | 862 | 3.15 | 883 | 3.31 | 903 | 3.49 | 923 | 3.67 | 943 | 3.85 |
| 11045 | 767 | 2.66 | 789 | 2.81 | 811 | 2.96 | 832 | 3.12 | 854 | 3.29 | 876 | 3.46 | 897 | 3.64 | 917 | 3.82 | 937 | 4.00 | 956 | 4.18 |
| | 3.73 Nom Oversized Motor & Drive | | | | | | | | 3.73 Nom Oversized Motor & High Static Drive Accessory | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

### Table 23. Evaporator fan performance TS*175F downflow or horizontal (IP)

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| cfm | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor & Low Static Drive Accessory | | | | | | | | | | 3HP Standard Motor Drive | | | | | | | | | |
| 4700 | — | — | 429 | 0.84 | 463 | 0.96 | 496 | 1.08 | 529 | 1.23 | 562 | 1.38 | 592 | 1.53 | 622 | 1.69 | 652 | 1.86 | 679 | 2.04 |
| 5150 | 419 | 0.90 | 457 | 1.05 | 489 | 1.18 | 520 | 1.31 | 549 | 1.46 | 580 | 1.62 | 610 | 1.79 | 638 | 1.95 | 665 | 2.12 | 693 | 2.30 |
| 5600 | 449 | 1.13 | 485 | 1.29 | 516 | 1.44 | 545 | 1.58 | 572 | 1.73 | 599 | 1.88 | 628 | 2.07 | 656 | 2.25 | 682 | 2.43 | 707 | 2.60 |
| 6050 | 478 | 1.39 | 513 | 1.56 | 544 | 1.74 | 571 | 1.89 | 597 | 2.04 | 623 | 2.20 | 648 | 2.38 | 674 | 2.57 | 700 | 2.77 | 725 | 2.96 |
| 6500 | 508 | 1.69 | 542 | 1.88 | 572 | 2.07 | 598 | 2.24 | 623 | 2.40 | 647 | 2.57 | 671 | 2.75 | 694 | 2.93 | 718 | 3.14 | 743 | 3.35 |
| | | | | | | | | | | | 3HP Standard Motor & High Static Drive Accessory | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| cfm | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor & High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 4700 | 705 | 2.22 | 731 | 2.41 | 756 | 2.60 | 780 | 2.80 | 803 | 2.99 | 826 | 3.18 | 848 | 3.37 | 870 | 3.57 | 890 | 3.76 | 910 | 3.96 |
| 5150 | 719 | 2.49 | 744 | 2.68 | 768 | 2.88 | 792 | 3.08 | 815 | 3.29 | 837 | 3.51 | 859 | 3.72 | 880 | 3.93 | 901 | 4.14 | 921 | 4.35 |
| 5600 | 732 | 2.79 | 758 | 3.00 | 782 | 3.20 | 805 | 3.41 | 827 | 3.62 | 849 | 3.84 | 870 | 4.06 | 891 | 4.29 | 912 | 4.53 | 932 | 4.76 |
| 6050 | 749 | 3.15 | 771 | 3.34 | 795 | 3.56 | 819 | 3.78 | 841 | 4.00 | 862 | 4.22 | 883 | 4.44 | 903 | 4.68 | 923 | 4.92 | 943 | 5.16 |
| 6500 | 767 | 3.56 | 789 | 3.77 | 811 | 3.97 | 832 | 4.18 | 854 | 4.41 | 876 | 4.65 | 897 | 4.88 | 917 | 5.12 | 937 | 5.36 | 956 | 5.61 |
| | 5HP Oversized Motor & Drive | | | | | | | | 5HP Oversized Motor & High Static Drive Accessory | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 24. Evaporator fan performance TS*200F downflow or horizontal (SI)**

| | External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kw Standard Motor & Low Static Drive Accy | | | | | | | | | | 2.24 Nom kw Standard Motor & High Static Drive Accy | | | | | | | | | |
| 9005 | 429 | 0.72 | 466 | 0.84 | 498 | 0.94 | 528 | 1.04 | 557 | 1.15 | 586 | 1.27 | 616 | 1.40 | 644 | 1.53 | 670 | 1.65 | 697 | 1.78 |
| 9940 | 465 | 0.94 | 501 | 1.07 | 531 | 1.19 | 559 | 1.30 | 586 | 1.42 | 612 | 1.53 | 638 | 1.66 | 666 | 1.81 | 692 | 1.95 | 717 | 2.09 |
| 10875 | 502 | 1.21 | 536 | 1.35 | 565 | 1.49 | 592 | 1.61 | 617 | 1.73 | 642 | 1.86 | 665 | 1.98 | 689 | 2.12 | 714 | 2.28 | 739 | 2.43 |
| 11810 | 539 | 1.53 | 572 | 1.67 | 600 | 1.83 | 626 | 1.97 | 650 | 2.10 | 673 | 2.23 | 695 | 2.36 | 717 | 2.50 | 739 | 2.65 | 761 | 2.81 |
| 12745 | 575 | 1.87 | 607 | 2.05 | 635 | 2.21 | 660 | 2.37 | 683 | 2.52 | 704 | 2.66 | 726 | 2.80 | 747 | 2.95 | 767 | 3.10 | 787 | 3.25 |
| | 2.24 Nom kw Standard Motor Drive | | | | | | | | | | 3.73 Nom kw Oversized Motor & Drive | | | | | | | | | |

**Continued**

| | External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| $m^3/h$ | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 9005 | 724 | 1.93 | 749 | 2.07 | 772 | 2.22 | 796 | 2.37 | 818 | 2.53 | 841 | 2.69 | 862 | 2.86 | 884 | 3.02 | 904 | 3.18 | 925 | 3.34 |
| 9940 | 741 | 2.22 | 765 | 2.37 | 790 | 2.53 | 813 | 2.69 | 835 | 2.85 | 856 | 3.01 | 877 | 3.18 | 898 | 3.36 | 918 | 3.53 | 938 | 3.71 |
| 10875 | 763 | 2.59 | 786 | 2.74 | 807 | 2.89 | 829 | 3.05 | 851 | 3.22 | 873 | 3.39 | 894 | 3.57 | 914 | 3.74 | 934 | 3.92 | 953 | 4.10 |
| 11810 | 784 | 2.98 | 807 | 3.15 | 829 | 3.32 | 850 | 3.48 | 870 | 3.64 | 889 | 3.81 | 910 | 3.99 | 931 | 4.18 | — | — | — | — |
| 12745 | 808 | 3.42 | 829 | 3.60 | 850 | 3.78 | 871 | 3.96 | 892 | 4.14 | — | — | — | — | — | — | — | — | — | — |
| | 3.73 Nom kw Oversized Motor & Drive | | | | | | | | | | 3.73 Nom kw Oversized Motor & High Static Drive Accessory | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 25. Evaporator fan performance TS*200F downflow or horizontal (IP)**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| cfm | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor & Low Static Drive Accessory | | | | | | | | | | 3HP Standard Motor & High Static Drive Accessory | | | | | | | | | |
| 5300 | 429 | 0.97 | 466 | 1.13 | 498 | 1.26 | 528 | 1.40 | 557 | 1.54 | 586 | 1.70 | 616 | 1.88 | 644 | 2.05 | 670 | 2.21 | 697 | 2.39 |
| 5850 | 465 | 1.27 | 501 | 1.44 | 531 | 1.60 | 559 | 1.75 | 586 | 1.90 | 612 | 2.06 | 638 | 2.23 | 666 | 2.42 | 692 | 2.61 | 717 | 2.80 |
| 6400 | 502 | 1.62 | 536 | 1.81 | 565 | 2.00 | 592 | 2.16 | 617 | 2.32 | 642 | 2.49 | 665 | 2.66 | 689 | 2.85 | 714 | 3.05 | 739 | 3.26 |
| 6950 | 539 | 2.05 | 572 | 2.24 | 600 | 2.45 | 626 | 2.64 | 650 | 2.82 | 673 | 2.99 | 695 | 3.17 | 717 | 3.36 | 739 | 3.55 | 761 | 3.77 |
| 7500 | 575 | 2.51 | 607 | 2.74 | 635 | 2.97 | 660 | 3.18 | 683 | 3.38 | 704 | 3.57 | 726 | 3.76 | 747 | 3.95 | 767 | 4.16 | 787 | 4.36 |
| | 3HP Standard Motor Drive | | | | | | | | | | 5HP Oversized Motor & Drive | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| cfm | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor & High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 5300 | 724 | 2.59 | 749 | 2.78 | 772 | 2.98 | 796 | 3.18 | 818 | 3.40 | 841 | 3.61 | 862 | 3.83 | 884 | 4.05 | 904 | 4.27 | 925 | 4.48 |
| 5850 | 741 | 2.98 | 765 | 3.18 | 790 | 3.40 | 813 | 3.61 | 835 | 3.82 | 856 | 4.04 | 877 | 4.27 | 898 | 4.50 | 918 | 4.74 | 938 | 4.98 |
| 6400 | 763 | 3.47 | 786 | 3.67 | 807 | 3.87 | 829 | 4.08 | 851 | 4.31 | 873 | 4.55 | 894 | 4.78 | 914 | 5.01 | 934 | 5.26 | 953 | 5.50 |
| 6950 | 784 | 4.00 | 807 | 4.23 | 829 | 4.45 | 850 | 4.67 | 870 | 4.89 | 889 | 5.11 | 910 | 5.35 | 931 | 5.60 | — | — | — | — |
| 7500 | 808 | 4.59 | 829 | 4.82 | 850 | 5.07 | 871 | 5.31 | 892 | 5.56 | — | — | — | — | — | — | — | — | — | — |
| | 5HP Oversized Motor & Drive | | | | | | 5HP Oversized Motor & High Static Drive Accessory | | | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

### Table 26. Evaporator fan performance TS*250F downflow or horizontal (SI)

| | External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 3.73 Nom kW Standard Motor & Low Static Drive Accessory | | | | | | | | | | | | 3.73 Nom kw Standard Motor and Drive | | | | | | | |
| 11380 | 521 | 1.37 | 556 | 1.52 | 584 | 1.67 | 610 | 1.80 | 635 | 1.93 | 658 | 2.05 | 681 | 2.19 | 704 | 2.32 | 727 | 2.47 | 751 | 2.63 |
| 12485 | 566 | 1.78 | 597 | 1.94 | 625 | 2.11 | 650 | 2.26 | 674 | 2.41 | 696 | 2.54 | 717 | 2.68 | 738 | 2.82 | 759 | 2.97 | 780 | 3.13 |
| 13590 | 610 | 2.26 | 639 | 2.43 | 667 | 2.61 | 691 | 2.79 | 714 | 2.96 | 735 | 3.11 | 755 | 3.26 | 775 | 3.41 | 795 | 3.56 | 814 | 3.72 |
| 14695 | 656 | 2.84 | 683 | 3.02 | 709 | 3.20 | 732 | 3.40 | 754 | 3.58 | 775 | 3.76 | 794 | 3.93 | 813 | 4.09 | 832 | 4.25 | — | — |
| 15800 | 701 | 3.51 | 725 | 3.68 | 750 | 3.88 | 773 | 4.09 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 3.73 Nom kw Standard Motor & High Static Drive Accessory (1) | | | | | | | | | | | | | | | | | | | |

**Continued**

| | External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| $m^3/h$ | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 3.73 Nom kw Standard Motor & High Static Drive Accessory (1) | | | | | | | | | | | | | | | | | | | |
| 11380 | 774 | 2.80 | 797 | 2.96 | 819 | 3.12 | 839 | 3.27 | 860 | 3.44 | 882 | 3.61 | 903 | 3.79 | 924 | 3.98 | 943 | 4.16 | — | — |
| 12485 | 801 | 3.29 | 823 | 3.47 | 844 | 3.65 | 865 | 3.83 | 886 | 4.01 | 905 | 4.18 | — | — | — | — | — | — | — | — |
| 13590 | 833 | 3.88 | 852 | 4.06 | 871 | 4.24 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 14695 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 15800 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 3.73 Nom kw Standard Motor & High Static Drive Accessory (2) | | | | | | | | | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

### Table 27. Evaporator fan performance TS*250F downflow or horizontal (IP)

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| cfm | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 5HP Standard Motor & Low Static Drive Accessory | | | | | | | | | | | | 5HP Standard Motor and Drive | | | | | | | |
| 6700 | 521 | 1.84 | 556 | 2.04 | 584 | 2.23 | 610 | 2.42 | 635 | 2.58 | 658 | 2.75 | 681 | 2.93 | 704 | 3.11 | 727 | 3.31 | 751 | 3.53 |
| 7350 | 566 | 2.39 | 597 | 2.60 | 625 | 2.82 | 650 | 3.03 | 674 | 3.23 | 696 | 3.40 | 717 | 3.59 | 738 | 3.78 | 759 | 3.98 | 780 | 4.19 |
| 8000 | 610 | 3.03 | 639 | 3.26 | 667 | 3.50 | 691 | 3.74 | 714 | 3.97 | 735 | 4.17 | 755 | 4.37 | 775 | 4.57 | 795 | 4.78 | 814 | 4.99 |
| 8650 | 656 | 3.81 | 683 | 4.06 | 709 | 4.30 | 732 | 4.56 | 754 | 4.80 | 775 | 5.05 | 794 | 5.27 | 813 | 5.48 | 832 | 5.70 | — | — |
| 9300 | 701 | 4.70 | 725 | 4.93 | 750 | 5.20 | 773 | 5.48 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 5HP Standard Motor & High Static Drive Accessory (1) | | | | | | | | | | | | | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| cfm | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 5HP Standard Motor & High Static Drive Accessory (1) | | | | | | | | | | | | | | | | | | | |
| 6700 | 774 | 3.75 | 797 | 3.97 | 819 | 4.18 | 839 | 4.39 | 860 | 4.61 | 882 | 4.84 | 903 | 5.09 | 924 | 5.33 | 943 | 5.58 | — | — |
| 7350 | 801 | 4.42 | 823 | 4.66 | 844 | 4.90 | 865 | 5.13 | 886 | 5.37 | 905 | 5.60 | — | — | — | — | — | — | — | — |
| 8000 | 833 | 5.21 | 852 | 5.44 | 871 | 5.69 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 8650 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 9300 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 5HP Standard Motor & High Static Drive Accessory (2) | | | | | | | | | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 28. Evaporator fan performance YS*155F downflow or horizontal (SI)**

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 1.49 Nom kW Standard Motor & Low Static Drive Accessory | | | | | | | | | | | | 1.49 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | |
| 7140 | — | — | 404 | 0.49 | 441 | 0.57 | 478 | 0.67 | 514 | 0.77 | 547 | 0.87 | 580 | 0.98 | 610 | 1.10 | 639 | 1.22 | 667 | 1.35 |
| 7820 | 391 | 0.52 | 429 | 0.61 | 463 | 0.69 | 496 | 0.79 | 530 | 0.90 | 563 | 1.01 | 593 | 1.12 | 624 | 1.24 | 652 | 1.37 | 679 | 1.49 |
| 8500 | 418 | 0.64 | 455 | 0.75 | 487 | 0.84 | 517 | 0.94 | 548 | 1.05 | 579 | 1.17 | 609 | 1.29 | 636 | 1.40 | 665 | 1.53 | 692 | 1.67 |
| 9180 | 446 | 0.79 | 481 | 0.91 | 511 | 1.01 | 540 | 1.11 | 568 | 1.22 | 596 | 1.34 | 626 | 1.47 | 653 | 1.60 | 679 | 1.73 | 705 | 1.86 |
| 9860 | 473 | 0.96 | 507 | 1.09 | 536 | 1.20 | 564 | 1.31 | 590 | 1.42 | 616 | 1.54 | 643 | 1.67 | 670 | 1.81 | 696 | 1.95 | 720 | 2.09 |
| | 1.49 Nom kw Standard Motor Drive | | | | | | | | | | | | 2.24 Nom kw Oversized Motor & Drive | | | | | | | |

**Continued**

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 1.49 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | | | | | | 2.24 Nom kw Oversized Motor & Drive | | | | | | | |
| 7140 | 694 | 1.48 | 721 | 1.60 | 746 | 1.73 | 770 | 1.86 | 793 | 1.99 | 816 | 2.12 | 837 | 2.25 | 859 | 2.38 | — | — | — | — |
| 7820 | 705 | 1.63 | 731 | 1.77 | 756 | 1.91 | 780 | 2.05 | 803 | 2.19 | 826 | 2.33 | 848 | 2.47 | — | — | — | — | — | — |
| 8500 | 718 | 1.80 | 743 | 1.95 | 767 | 2.09 | 790 | 2.24 | 813 | 2.40 | 836 | 2.55 | — | — | — | — | — | — | — | — |
| 9180 | 732 | 2.01 | 756 | 2.15 | 779 | 2.30 | 802 | 2.45 | — | — | — | — | — | — | — | — | — | — | — | — |
| 9860 | 744 | 2.22 | 769 | 2.38 | 793 | 2.53 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 29. Evaporator fan performance YS*155F downflow or horizontal (IP)**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 2HP Standard Motor & Low Static Drive Accessory | | | | | | | | | | 2HP Standard Motor & High Static Drive Accessory | | | | | | | | | |
| 4200 | — | — | 404 | 0.65 | 441 | 0.77 | 478 | 0.90 | 514 | 1.03 | 547 | 1.17 | 580 | 1.32 | 610 | 1.47 | 639 | 1.63 | 667 | 1.80 |
| 4600 | 391 | 0.69 | 429 | 0.81 | 463 | 0.93 | 496 | 1.06 | 530 | 1.21 | 563 | 1.36 | 593 | 1.50 | 624 | 1.67 | 652 | 1.83 | 679 | 2.00 |
| 5000 | 418 | 0.86 | 455 | 1.00 | 487 | 1.13 | 517 | 1.26 | 548 | 1.41 | 579 | 1.57 | 609 | 1.73 | 636 | 1.88 | 665 | 2.06 | 692 | 2.24 |
| 5400 | 446 | 1.06 | 481 | 1.22 | 511 | 1.35 | 540 | 1.49 | 568 | 1.63 | 596 | 1.80 | 626 | 1.97 | 653 | 2.15 | 679 | 2.31 | 705 | 2.49 |
| 5800 | 473 | 1.28 | 507 | 1.46 | 536 | 1.61 | 564 | 1.75 | 590 | 1.90 | 616 | 2.06 | 643 | 2.24 | 670 | 2.43 | 696 | 2.62 | 720 | 2.80 |
| | 2HP Standard Motor Drive | | | | | | | | | | | | | | 3HP Oversized Motor & Drive | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 2HP Standard Motor & High Static Drive Accessory | | | | | | | | | | 3HP Oversized Motor & Drive | | | | | | | | | |
| 4200 | 694 | 1.98 | 721 | 2.15 | 746 | 2.32 | 770 | 2.49 | 793 | 2.67 | 816 | 2.84 | 837 | 3.02 | 859 | 3.20 | — | — | — | — |
| 4600 | 705 | 2.18 | 731 | 2.37 | 756 | 2.56 | 780 | 2.75 | 803 | 2.94 | 826 | 3.12 | 848 | 3.31 | — | — | — | — | — | — |
| 5000 | 718 | 2.42 | 743 | 2.61 | 767 | 2.81 | 790 | 3.01 | 813 | 3.22 | 836 | 3.42 | — | — | — | — | — | — | — | — |
| 5400 | 732 | 2.69 | 756 | 2.88 | 779 | 3.08 | 802 | 3.29 | — | — | — | — | — | — | — | — | — | — | — | — |
| 5800 | 744 | 2.98 | 769 | 3.19 | 793 | 3.40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 30. Evaporator fan performance YS*175F downflow or horizontal (SI)**

| | External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kw Standard Motor & Low Static Drive Accy | | | | | | | | | | 2.24 Nom kw Standard Motor & High Static Drive Accy | | | | | | | | | |
| 7985 | — | — | 442 | 0.66 | 476 | 0.75 | 508 | 0.85 | 542 | 0.96 | 574 | 1.07 | 603 | 1.19 | 634 | 1.31 | 662 | 1.44 | 689 | 1.57 |
| 8750 | 437 | 0.72 | 472 | 0.83 | 503 | 0.92 | 533 | 1.03 | 563 | 1.14 | 594 | 1.27 | 623 | 1.39 | 650 | 1.51 | 678 | 1.64 | 705 | 1.78 |
| 9515 | 469 | 0.91 | 502 | 1.02 | 532 | 1.13 | 560 | 1.24 | 587 | 1.35 | 615 | 1.48 | 643 | 1.61 | 671 | 1.75 | 696 | 1.88 | 720 | 2.01 |
| 10280 | 502 | 1.12 | 533 | 1.25 | 561 | 1.37 | 588 | 1.48 | 613 | 1.60 | 638 | 1.72 | 664 | 1.86 | 690 | 2.01 | 716 | 2.16 | 740 | 2.30 |
| 11045 | 533 | 1.36 | 564 | 1.51 | 591 | 1.64 | 616 | 1.76 | 640 | 1.88 | 664 | 2.01 | 688 | 2.15 | 711 | 2.30 | 736 | 2.46 | 760 | 2.61 |
| | 2.24 Nom kw Standard Motor Drive | | | | | | | | | | 3.73 Nom kw Oversized Motor & Drive | | | | | | | | | |

**Continued**

| | External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| $m^3/h$ | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 7985 | 715 | 1.71 | 741 | 1.85 | 765 | 1.99 | 789 | 2.14 | 812 | 2.28 | 835 | 2.43 | 856 | 2.57 | 877 | 2.72 | 898 | 2.86 | 918 | 3.01 |
| 8750 | 731 | 1.92 | 755 | 2.06 | 779 | 2.21 | 802 | 2.37 | 825 | 2.53 | 847 | 2.69 | 869 | 2.85 | 890 | 3.00 | 910 | 3.16 | 930 | 3.32 |
| 9515 | 746 | 2.16 | 771 | 2.32 | 794 | 2.47 | 817 | 2.62 | 839 | 2.78 | 860 | 2.95 | 882 | 3.12 | 902 | 3.30 | 923 | 3.47 | 943 | 3.64 |
| 10280 | 763 | 2.44 | 786 | 2.59 | 810 | 2.75 | 833 | 2.92 | 854 | 3.08 | 875 | 3.25 | 896 | 3.42 | 916 | 3.60 | 936 | 3.78 | 956 | 3.97 |
| 11045 | 783 | 2.77 | 805 | 2.92 | 826 | 3.07 | 848 | 3.24 | 870 | 3.42 | 892 | 3.59 | 912 | 3.77 | 931 | 3.95 | 951 | 4.13 | — | — |
| | 3.73 Nom kw Oversized Motor & Drive | | | | | | 3.73 Nom kw Oversized Motor & High Static Drive Accessory | | | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 31. Evaporator fan performance YS*175F downflow or horizontal (IP)**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor & Low Static Drive Accessory | | | | | | | | | | 3HP Standard Motor & High Static Drive Accessory | | | | | | | | | |
| 4700 | — | — | 442 | 0.88 | 476 | 1.00 | 508 | 1.14 | 542 | 1.29 | 574 | 1.44 | 603 | 1.59 | 634 | 1.76 | 662 | 1.93 | 689 | 2.10 |
| 5150 | 437 | 0.97 | 472 | 1.11 | 503 | 1.24 | 533 | 1.38 | 563 | 1.53 | 594 | 1.70 | 623 | 1.86 | 650 | 2.02 | 678 | 2.20 | 705 | 2.39 |
| 5600 | 469 | 1.22 | 502 | 1.37 | 532 | 1.51 | 560 | 1.66 | 587 | 1.81 | 615 | 1.98 | 643 | 2.16 | 671 | 2.35 | 696 | 2.52 | 720 | 2.70 |
| 6050 | 502 | 1.50 | 533 | 1.68 | 561 | 1.83 | 588 | 1.99 | 613 | 2.14 | 638 | 2.31 | 664 | 2.50 | 690 | 2.70 | 716 | 2.89 | 740 | 3.08 |
| 6500 | 533 | 1.82 | 564 | 2.02 | 591 | 2.20 | 616 | 2.36 | 640 | 2.53 | 664 | 2.70 | 688 | 2.88 | 711 | 3.08 | 736 | 3.29 | 760 | 3.50 |
| | 3HP Standard Motor Drive | | | | | | | | | | | | 5HP Oversized Motor & Drive | | | | | | | |

**Continued**

| | External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor & High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 4700 | 715 | 2.29 | 741 | 2.48 | 765 | 2.68 | 789 | 2.87 | 812 | 3.06 | 835 | 3.25 | 856 | 3.45 | 877 | 3.64 | 898 | 3.84 | 918 | 4.03 |
| 5150 | 731 | 2.58 | 755 | 2.77 | 779 | 2.97 | 802 | 3.18 | 825 | 3.39 | 847 | 3.60 | 869 | 3.82 | 890 | 4.03 | 910 | 4.24 | 930 | 4.45 |
| 5600 | 746 | 2.90 | 771 | 3.11 | 794 | 3.31 | 817 | 3.52 | 839 | 3.73 | 860 | 3.96 | 882 | 4.19 | 902 | 4.42 | 923 | 4.65 | 943 | 4.88 |
| 6050 | 763 | 3.27 | 786 | 3.48 | 810 | 3.69 | 833 | 3.91 | 854 | 4.14 | 875 | 4.36 | 896 | 4.59 | 916 | 4.83 | 936 | 5.07 | 956 | 5.32 |
| 6500 | 783 | 3.71 | 805 | 3.92 | 826 | 4.12 | 848 | 4.35 | 870 | 4.58 | 892 | 4.82 | 912 | 5.05 | 931 | 5.29 | 951 | 5.54 | — | — |
| | 5HP Oversized Motor & Drive | | | | | | 5HP Oversized Motor & High Static Drive Accessory | | | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 32. Evaporator fan performance YS*200F downflow or horizontal (SI)**

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kw Standard Motor & Low Static Drive Accy | | | | | | | | | | 2.24 Nom kw Standard Motor & High Static Drive Accy | | | | | | | | | |
| 9005 | 448 | 0.78 | 482 | 0.89 | 513 | 0.99 | 542 | 1.09 | 571 | 1.21 | 601 | 1.33 | 630 | 1.46 | 657 | 1.59 | 683 | 1.71 | 710 | 1.86 |
| 9940 | 487 | 1.02 | 519 | 1.15 | 548 | 1.26 | 575 | 1.37 | 601 | 1.48 | 627 | 1.61 | 655 | 1.75 | 682 | 1.89 | 707 | 2.03 | 731 | 2.17 |
| 10875 | 527 | 1.31 | 557 | 1.45 | 584 | 1.58 | 610 | 1.69 | 634 | 1.82 | 658 | 1.95 | 682 | 2.08 | 707 | 2.23 | 732 | 2.39 | 756 | 2.54 |
| 11810 | 566 | 1.64 | 595 | 1.80 | 622 | 1.95 | 646 | 2.08 | 668 | 2.21 | 691 | 2.34 | 713 | 2.48 | 735 | 2.63 | 757 | 2.78 | 780 | 2.95 |
| 12745 | 607 | 2.05 | 634 | 2.21 | 659 | 2.37 | 682 | 2.52 | 704 | 2.66 | 725 | 2.80 | 746 | 2.94 | 767 | 3.09 | 787 | 3.25 | 807 | 3.41 |
| | 2.24 Nom kw Standard Motor Drive | | | | | | | | 3.73 Nom kw Oversized Motor & Drive | | | | | | | | | | | |

**Continued**

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| $m^3/h$ | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 9005 | 736 | 2.00 | 760 | 2.15 | 784 | 2.29 | 807 | 2.45 | 829 | 2.61 | 851 | 2.77 | 873 | 2.94 | 894 | 3.10 | 914 | 3.26 | 934 | 3.42 |
| 9940 | 755 | 2.31 | 780 | 2.47 | 803 | 2.62 | 826 | 2.78 | 847 | 2.95 | 868 | 3.11 | 889 | 3.28 | 910 | 3.46 | 930 | 3.64 | 950 | 3.82 |
| 10875 | 779 | 2.69 | 800 | 2.84 | 822 | 3.00 | 845 | 3.17 | 867 | 3.34 | 888 | 3.51 | 908 | 3.69 | 928 | 3.87 | 947 | 4.05 | 966 | 4.23 |
| 11810 | 803 | 3.12 | 825 | 3.29 | 847 | 3.46 | 866 | 3.62 | 886 | 3.78 | 907 | 3.96 | 928 | 4.15 | — | — | — | — | — | — |
| 12745 | 828 | 3.59 | 850 | 3.78 | 871 | 3.96 | 891 | 4.14 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 3.73 Nom kw Oversized Motor & Drive | | | | | | | | 3.73 Nom kw Oversized Motor & High Static Drive Accessory | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 33. Evaporator fan performance YS*200F downflow or horizontal (IP)**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor & Low Static Drive Accessory | | | | | | | | 3HP Standard Motor & High Static Drive Accessory | | | | | | | | | | | |
| 5300 | 448 | 1.05 | 482 | 1.19 | 513 | 1.33 | 542 | 1.46 | 571 | 1.62 | 601 | 1.79 | 630 | 1.96 | 657 | 2.13 | 683 | 2.30 | 710 | 2.49 |
| 5850 | 487 | 1.37 | 519 | 1.54 | 548 | 1.68 | 575 | 1.83 | 601 | 1.99 | 627 | 2.16 | 655 | 2.35 | 682 | 2.54 | 707 | 2.72 | 731 | 2.91 |
| 6400 | 527 | 1.76 | 557 | 1.95 | 584 | 2.11 | 610 | 2.27 | 634 | 2.44 | 658 | 2.61 | 682 | 2.79 | 707 | 2.99 | 732 | 3.20 | 756 | 3.41 |
| 6950 | 566 | 2.20 | 595 | 2.41 | 622 | 2.62 | 646 | 2.79 | 668 | 2.96 | 691 | 3.14 | 713 | 3.33 | 735 | 3.52 | 757 | 3.73 | 780 | 3.96 |
| 7500 | 607 | 2.75 | 634 | 2.97 | 659 | 3.18 | 682 | 3.38 | 704 | 3.57 | 725 | 3.76 | 746 | 3.94 | 767 | 4.15 | 787 | 4.36 | 807 | 4.57 |
| | 3HP Standard Motor Drive | | | | | | | | 5HP Oversized Motor & Drive | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor & High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 5300 | 736 | 2.68 | 760 | 2.88 | 784 | 3.08 | 807 | 3.29 | 829 | 3.50 | 851 | 3.72 | 873 | 3.94 | 894 | 4.16 | 914 | 4.37 | 934 | 4.59 |
| 5850 | 755 | 3.10 | 780 | 3.31 | 803 | 3.52 | 826 | 3.73 | 847 | 3.95 | 868 | 4.17 | 889 | 4.40 | 910 | 4.64 | 930 | 4.88 | 950 | 5.12 |
| 6400 | 779 | 3.61 | 800 | 3.81 | 822 | 4.02 | 845 | 4.25 | 867 | 4.48 | 888 | 4.71 | 908 | 4.95 | 928 | 5.19 | 947 | 5.43 | 966 | 5.68 |
| 6950 | 803 | 4.19 | 825 | 4.41 | 847 | 4.63 | 866 | 4.85 | 886 | 5.07 | 907 | 5.31 | 928 | 5.56 | — | — | — | — | — | — |
| 7500 | 828 | 4.82 | 850 | 5.06 | 871 | 5.31 | 891 | 5.55 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 5HP Oversized Motor & Drive | | | | | | | | 5HP Oversized Motor & High Static Drive Accessory | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 34. Evaporator fan performance YS*250F downflow or horizontal (SI)**

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 3.73 Nom kW Standard Motor & Low Static Drive Accessory | | | | | | | | | | | | 3.73 Nom kW Standard Motor and Drive | | | | | | | |
| 11380 | 548 | 1.48 | 578 | 1.64 | 604 | 1.77 | 629 | 1.90 | 653 | 2.02 | 676 | 2.15 | 699 | 2.29 | 721 | 2.44 | 745 | 2.60 | 769 | 2.76 |
| 12485 | 596 | 1.93 | 623 | 2.09 | 649 | 2.25 | 672 | 2.39 | 694 | 2.53 | 716 | 2.67 | 737 | 2.81 | 758 | 2.96 | 778 | 3.12 | 800 | 3.28 |
| 13590 | 641 | 2.44 | 670 | 2.64 | 693 | 2.80 | 716 | 2.97 | 737 | 3.12 | 757 | 3.27 | 777 | 3.42 | 797 | 3.58 | 816 | 3.74 | 835 | 3.90 |
| 14695 | 690 | 3.07 | 717 | 3.27 | 739 | 3.45 | 760 | 3.64 | 780 | 3.81 | 799 | 3.97 | 818 | 4.13 | — | — | — | — | — | — |
| 15800 | 737 | 3.76 | 762 | 3.98 | 784 | 4.20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 3.73 Nom kW Standard Motor & High Static Drive Accessory (1) | | | | | | | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| $m^3/h$ | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 3.73 Nom kW Standard Motor & High Static Drive Accessory (1) | | | | | | | | | | | | | | | | | | | |
| 11380 | 792 | 2.92 | 814 | 3.08 | 835 | 3.24 | 855 | 3.40 | 877 | 3.57 | 898 | 3.75 | 919 | 3.93 | 939 | 4.12 | — | — | — | — |
| 12485 | 821 | 3.46 | 843 | 3.64 | 864 | 3.82 | 885 | 3.99 | 904 | 4.17 | — | — | — | — | — | — | — | — | — | — |
| 13590 | 853 | 4.07 | 873 | 4.26 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 14695 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 15800 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 3.73 Nom kW Standard Motor & High Static Drive Accessory (2) | | | | | | | | | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

**Table 35. Evaporator fan performance YS*250F downflow or horizontal (IP)**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 5HP Standard Motor & Low Static Drive Accessory | | | | | | | | | | | | 5HP Standard Motor and Drive | | | | | | | |
| 6700 | 548 | 1.98 | 578 | 2.19 | 604 | 2.37 | 629 | 2.54 | 653 | 2.71 | 676 | 2.89 | 699 | 3.07 | 721 | 3.27 | 745 | 3.48 | 769 | 3.70 |
| 7350 | 596 | 2.59 | 623 | 2.81 | 649 | 3.02 | 672 | 3.21 | 694 | 3.39 | 716 | 3.58 | 737 | 3.77 | 758 | 3.97 | 778 | 4.18 | 800 | 4.40 |
| 8000 | 641 | 3.27 | 670 | 3.54 | 693 | 3.76 | 716 | 3.99 | 737 | 4.19 | 757 | 4.39 | 777 | 4.59 | 797 | 4.80 | 816 | 5.02 | 835 | 5.24 |
| 8650 | 690 | 4.12 | 717 | 4.39 | 739 | 4.63 | 760 | 4.89 | 780 | 5.11 | 799 | 5.32 | 818 | 5.54 | — | — | — | — | — | — |
| 9300 | 737 | 5.04 | 762 | 5.34 | 784 | 5.63 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 5HP Standard Motor & High Static Drive Accessory (1) | | | | | | | | | | | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 5HP Standard Motor & High Static Drive Accessory (1) | | | | | | | | | | | | | | | | | | | |
| 6700 | 792 | 3.92 | 814 | 4.13 | 835 | 4.34 | 855 | 4.55 | 877 | 4.79 | 898 | 5.03 | 919 | 5.28 | 939 | 5.52 | — | — | — | — |
| 7350 | 821 | 4.64 | 843 | 4.88 | 864 | 5.12 | 885 | 5.36 | 904 | 5.59 | — | — | — | — | — | — | — | — | — | — |
| 8000 | 853 | 5.46 | 873 | 5.72 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 8650 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 9300 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 5HP Standard Motor & High Static Drive Accessory (2) | | | | | | | | | | | | | | | | | | | |

**Note:** Data includes pressure drop for filters and wet coil.

### Table 36. Evaporator fan performance WS*155E downflow or horizontal (SI)

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 1.49 Nom kW Standard Motor & Low Static Drive Accessory | | | | | | | | | | 1.49 Nom kW Standard Motor & High Static Drive Accessory | | | | | | | | | |
| 6800 | 346 | 0.35 | 388 | 0.43 | 426 | 0.51 | 465 | 0.60 | 502 | 0.70 | 537 | 0.80 | 570 | 0.91 | 601 | 1.02 | 631 | 1.14 | 660 | 1.27 |
| 7650 | 377 | 0.47 | 417 | 0.56 | 452 | 0.65 | 486 | 0.74 | 521 | 0.85 | 554 | 0.96 | 585 | 1.07 | 617 | 1.19 | 646 | 1.31 | 673 | 1.44 |
| 8500 | 409 | 0.62 | 448 | 0.73 | 480 | 0.82 | 512 | 0.92 | 542 | 1.03 | 574 | 1.15 | 604 | 1.27 | 632 | 1.38 | 661 | 1.51 | 689 | 1.65 |
| 9350 | 442 | 0.80 | 479 | 0.92 | 510 | 1.03 | 539 | 1.13 | 567 | 1.24 | 595 | 1.36 | 624 | 1.49 | 652 | 1.63 | 678 | 1.76 | 703 | 1.89 |
| 10200 | 475 | 1.01 | 510 | 1.14 | 541 | 1.27 | 568 | 1.38 | 594 | 1.50 | 620 | 1.62 | 645 | 1.74 | 672 | 1.89 | 698 | 2.04 | 723 | 2.18 |
| | 1.49 Nom kW Standard Motor Drive | | | | | | | | | | 2.24 Nom kW Oversized Motor & Drive | | | | | | | | | |

**Continued**

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 1.49 Nom kW Standard Motor & High Static Drive Accessory | | | | | | | | | | | | | | | | | | | |
| 6800 | 687 | 1.39 | 714 | 1.51 | 739 | 1.64 | 763 | 1.76 | 787 | 1.88 | 809 | 2.01 | 831 | 2.14 | 851 | 2.27 | — | — | — | — |
| 7650 | 700 | 1.57 | 726 | 1.71 | 751 | 1.85 | 775 | 1.99 | 799 | 2.13 | 821 | 2.27 | 843 | 2.40 | — | — | — | — | — | — |
| 8500 | 714 | 1.78 | 739 | 1.93 | 764 | 2.07 | 788 | 2.22 | 811 | 2.38 | 833 | 2.54 | — | — | — | — | — | — | — | — |
| 9350 | 730 | 2.03 | 755 | 2.18 | 779 | 2.33 | 802 | 2.48 | — | — | — | — | — | — | — | — | — | — | — | — |
| 10200 | 747 | 2.32 | 770 | 2.46 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 2.24 Nom kw Oversized Motor & Drive | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. Data includes pressure drop for filters and wet coil.
2. For 200 volt, use 50 Hz reference Performance Data Table and Standard Motor & Sheave/Fan Speed (RPM) to determine applicable operating range.

### Table 37. Evaporator fan performance WS*155E downflow or horizontal (IP)

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 2HP Standard Motor & Low Static Drive Accessory | | | | | | | | | | 2HP Standard Motor & High Static Drive Accessory | | | | | | | | | |
| 4000 | 346 | 0.47 | 388 | 0.57 | 426 | 0.68 | 465 | 0.81 | 502 | 0.94 | 537 | 1.07 | 570 | 1.22 | 601 | 1.37 | 631 | 1.53 | 660 | 1.70 |
| 4500 | 377 | 0.63 | 417 | 0.75 | 452 | 0.87 | 486 | 1.00 | 521 | 1.14 | 554 | 1.29 | 585 | 1.43 | 617 | 1.60 | 646 | 1.76 | 673 | 1.93 |
| 5000 | 409 | 0.83 | 448 | 0.98 | 480 | 1.10 | 512 | 1.23 | 542 | 1.38 | 574 | 1.54 | 604 | 1.70 | 632 | 1.86 | 661 | 2.03 | 689 | 2.21 |
| 5500 | 442 | 1.07 | 479 | 1.23 | 510 | 1.38 | 539 | 1.51 | 567 | 1.66 | 595 | 1.82 | 624 | 2.00 | 652 | 2.18 | 678 | 2.36 | 703 | 2.53 |
| 6000 | 475 | 1.36 | 510 | 1.53 | 541 | 1.70 | 568 | 1.85 | 594 | 2.01 | 620 | 2.17 | 645 | 2.34 | 672 | 2.53 | 698 | 2.73 | 723 | 2.92 |
| | 2HP Standard Motor Drive | | | | | | | | | | | | 3HP Oversized Motor & Drive | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 2HP Standard Motor & High Static Drive Accessory | | | | | | | | | | 3HP Oversized Motor & Drive | | | | | | | | | |
| 4000 | 687 | 1.86 | 714 | 2.03 | 739 | 2.19 | 763 | 2.36 | 787 | 2.53 | 809 | 2.70 | 831 | 2.87 | 851 | 3.05 | — | — | — | — |
| 4500 | 700 | 2.11 | 726 | 2.30 | 751 | 2.48 | 775 | 2.67 | 799 | 2.85 | 821 | 3.04 | 843 | 3.22 | — | — | — | — | — | — |
| 5000 | 714 | 2.39 | 739 | 2.58 | 764 | 2.78 | 788 | 2.98 | 811 | 3.19 | 833 | 3.40 | — | — | — | — | — | — | — | — |
| 5500 | 730 | 2.72 | 755 | 2.92 | 779 | 3.12 | 802 | 3.33 | — | — | — | — | — | — | — | — | — | — | — | — |
| 6000 | 747 | 3.11 | 770 | 3.30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

**Notes:**
1. Data includes pressure drop for filters and wet coil.
2. For 200 volt, use 50 Hz reference Performance Data Table and Standard Motor & Sheave/Fan Speed (RPM) to determine applicable operating range.

### Table 38. Evaporator fan performance WS*200E downflow or horizontal (SI)

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25.00 | | 50.00 | | 75.00 | | 100.00 | | 125.00 | | 150.00 | | 175.00 | | 200.00 | | 225.00 | | 250.00 | |
| m3/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kW Standard Motor Drive | | | | | | | | 2.24 Nom kw Standard Motor Drive & High Static Drive Accessory | | | | | | | | | | | |
| 8970 | — | — | — | — | 446 | 0.80 | 475 | 0.91 | 504 | 1.03 | 533 | 1.15 | 561 | 1.28 | 588 | 1.42 | 613 | 1.56 | 636 | 1.69 |
| 10090 | — | — | 449 | 0.94 | 481 | 1.05 | 510 | 1.18 | 536 | 1.31 | 561 | 1.44 | 587 | 1.58 | 611 | 1.72 | 636 | 1.87 | 660 | 2.03 |
| 11210 | 451 | 1.10 | 486 | 1.25 | 517 | 1.38 | 545 | 1.51 | 570 | 1.65 | 593 | 1.80 | 616 | 1.95 | 639 | 2.10 | 661 | 2.25 | 684 | 2.41 |
| 12330 | 491 | 1.45 | 525 | 1.62 | 554 | 1.77 | 581 | 1.91 | 605 | 2.06 | 628 | 2.21 | 649 | 2.38 | 670 | 2.54 | 691 | 2.71 | 711 | 2.87 |
| 13450 | 531 | 1.86 | 563 | 2.06 | 592 | 2.24 | 617 | 2.39 | 641 | 2.54 | 663 | 2.70 | 684 | 2.88 | 704 | 3.06 | 723 | 3.24 | 742 | 3.42 |
| | | | | | | | | | 3.73 Nom kw Oversized Motor & Low Static Drive Accessory | | | | | | | | | | | |

**Continued**

| External Static Pressure (Pascals) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 275.00 | | 300.00 | | 325.00 | | 350.00 | | 375.00 | | 400.00 | | 425.00 | | 450.00 | | 475.00 | | 500.00 | |
| m³/h | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW | RPM | kW |
| | 2.24 Nom kw Standard Motor & High Static Drive Accessory | | | | | | | | | | | 3.73 Nom kw Oversized Motor & Drive | | | | | | | | |
| 8970 | 657 | 1.83 | 678 | 1.97 | 699 | 2.11 | 721 | 2.26 | 742 | 2.41 | 762 | 2.57 | 782 | 2.72 | 801 | 2.87 | 820 | 3.03 | 837 | 3.18 |
| 10090 | 683 | 2.18 | 704 | 2.34 | 724 | 2.49 | 743 | 2.65 | 762 | 2.81 | 780 | 2.97 | 799 | 3.13 | 817 | 3.30 | 836 | 3.47 | 854 | 3.65 |
| 11210 | 706 | 2.57 | 728 | 2.75 | 749 | 2.92 | 769 | 3.10 | 787 | 3.27 | 805 | 3.44 | 822 | 3.62 | 839 | 3.79 | 856 | 3.97 | 872 | 4.15 |
| 12330 | 731 | 3.04 | 751 | 3.22 | 772 | 3.40 | 792 | 3.59 | 811 | 3.78 | 830 | 3.97 | 848 | 4.17 | — | — | — | — | — | — |
| 13450 | 760 | 3.60 | 779 | 3.78 | 798 | 3.96 | 816 | 4.15 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 3.73 Nom kw Oversized Motor & Low Static Drive Accessory | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. Data includes pressure drop for filters and wet coil.
2. For 200 volt, use 50 Hz reference Performance Data Table and Standard Motor & Sheave/Fan Speed (RPM) to determine applicable operating range.

### Table 39. Evaporator fan performance WS*200E downflow or horizontal (IP)

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .10 | | .20 | | .30 | | .40 | | .50 | | .60 | | .70 | | .80 | | .90 | | 1.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor Drive | | | | | | | | 3HP Standard Motor Drive & High Static Drive Accessory | | | | | | | | | | | |
| 5200 | — | — | — | — | 446 | 1.07 | 475 | 1.22 | 504 | 1.38 | 533 | 1.54 | 561 | 1.72 | 588 | 1.90 | 613 | 2.09 | 636 | 2.27 |
| 5900 | — | — | 449 | 1.26 | 481 | 1.41 | 510 | 1.58 | 536 | 1.76 | 561 | 1.94 | 587 | 2.12 | 611 | 2.31 | 636 | 2.51 | 660 | 2.72 |
| 6600 | 451 | 1.47 | 486 | 1.67 | 517 | 1.85 | 545 | 2.02 | 570 | 2.21 | 593 | 2.41 | 616 | 2.61 | 639 | 2.81 | 661 | 3.02 | 684 | 3.23 |
| 7300 | 491 | 1.95 | 525 | 2.17 | 554 | 2.38 | 581 | 2.56 | 605 | 2.76 | 628 | 2.97 | 649 | 3.19 | 670 | 3.41 | 691 | 3.63 | 711 | 3.85 |
| 8000 | 531 | 2.50 | 563 | 2.77 | 592 | 3.00 | 617 | 3.21 | 641 | 3.41 | 663 | 3.62 | 684 | 3.86 | 704 | 4.10 | 723 | 4.34 | 742 | 4.58 |
| | | | | | | | | | | | 5HP Oversized Motor & Low Static Drive Accessory | | | | | | | | | |

**Continued**

| External Static Pressure (Inches of Water) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.10 | | 1.20 | | 1.30 | | 1.40 | | 1.50 | | 1.60 | | 1.70 | | 1.80 | | 1.90 | | 2.00 | |
| CFM | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| | 3HP Standard Motor & High Static Drive Accessory | | | | | | | | | | | | 5HP Oversized Motor & Drive | | | | | | | |
| 5200 | 657 | 2.45 | 678 | 2.64 | 699 | 2.84 | 721 | 3.03 | 742 | 3.24 | 762 | 3.44 | 782 | 3.65 | 801 | 3.85 | 820 | 4.06 | 837 | 4.26 |
| 5900 | 683 | 2.93 | 704 | 3.14 | 724 | 3.34 | 743 | 3.55 | 762 | 3.76 | 780 | 3.98 | 799 | 4.20 | 817 | 4.43 | 836 | 4.66 | 854 | 4.89 |
| 6600 | 706 | 3.45 | 728 | 3.68 | 749 | 3.92 | 769 | 4.15 | 787 | 4.38 | 805 | 4.62 | 822 | 4.85 | 839 | 5.09 | 856 | 5.32 | 872 | 5.57 |
| 7300 | 731 | 4.08 | 751 | 4.31 | 772 | 4.56 | 792 | 4.81 | 811 | 5.07 | 830 | 5.33 | 848 | 5.59 | — | — | — | — | — | — |
| 8000 | 760 | 4.82 | 779 | 5.07 | 798 | 5.32 | 816 | 5.57 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 5HP Oversized Motor & Low Static Drive Accessory | | | | | | | | | | | | | | | | | | | |

**Notes:**
1. Data includes pressure drop for filters and wet coil.
2. For 200 volt, use 50 Hz reference Performance Data Table and Standard Motor & Sheave/Fan Speed (RPM) to determine applicable operating range.

**Table 40. T/YS*155–250 standard motor and drive/fan speed (rpm)**

| Unit Model No. | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1Turns Open | Closed |
|---|---|---|---|---|---|---|---|
| T/YS*155F | 466 | 501 | 535 | 570 | 604 | 639 | N/A |
| T/YS*175F | 500 | 537 | 574 | 611 | 648 | 685 | N/A |
| T/YS*200F | 500 | 537 | 574 | 611 | 648 | 685 | N/A |
| T/YS*250F | 587 | 619 | 651 | 682 | 714 | 746 | N/A |

**Notes:**
**1.** * indicates both horizontal and downflow units
**2.** Factory set at 3 turns open.

**Table 41. T/YS*155–250 standard motor and low static fan drive**

| Unit Model No. | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1Turns Open | Closed |
|---|---|---|---|---|---|---|---|
| T/YS*155F | 376 | 404 | 432 | 460 | 488 | 516 | N/A |
| T/YS*175F | 418 | 442 | 466 | 489 | 513 | 537 | N/A |
| T/YS*200F | 418 | 442 | 466 | 489 | 513 | 537 | N/A |
| T/YS*250F | 492 | 524 | 556 | 587 | 619 | 651 | N/A |

**Note:** * indicates both horizontal and downflow units

**Table 42. T/YS*155–250 standard motor and high static drive accessory/fan speed (rpm)**

| Unit Model No. | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1Turns Open | Closed |
|---|---|---|---|---|---|---|---|
| T/YS*155F | 600 | 628 | 656 | 683 | 711 | 739 | N/A |
| T/YS*175F | 685 | 722 | 759 | 796 | 833 | 870 | N/A |
| T/YS*200F | 685 | 722 | 759 | 796 | 833 | 870 | N/A |
| T/YS*250F | 702 | 740 | 778 | 815 | 853 | 891 | N/A |

**Note:** * indicates both horizontal and downflow units

**Table 43. T/YS*155–250 oversized motor and drive/fan speed (rpm)**

| Unit Model No. | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1Turns Open | Closed |
|---|---|---|---|---|---|---|---|
| T/YS*155F | 621 | 667 | 713 | 758 | 804 | 850 | N/A |
| T/YS*175F | 682 | 714 | 746 | 777 | 809 | 841 | N/A |
| T/YS*200F | 682 | 714 | 746 | 777 | 809 | 841 | N/A |
| T/YS*250F | 702 | 740 | 778 | 815 | 853 | 891 | N/A |

**Note:** * indicates both horizontal and downflow units

**Table 44. WS*155, 200 standard motor and drive/fan speed (rpm)**

| Unit Model No. | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1Turns Open | Closed |
|---|---|---|---|---|---|---|---|
| WS*155ED, ET | 416 | 447 | 478 | 509 | 540 | 571 | N/A |
| WS*200ED, ET | 574 | 611 | 648 | 685 | 722 | 759 | N/A |

**Note:** * indicates both horizontal and downflow units

**Table 45. WS*155, 200 standard motor and low static fan drive**

| Unit Model No. | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1Turns Open | Closed |
|---|---|---|---|---|---|---|---|
| WS*155ED | 316 | 339 | 363 | 386 | 410 | 433 | N/A |
| WS*200ED | 418 | 449 | 480 | 512 | 543 | 574 | N/A |

**Note:** * indicates both horizontal and downflow units

**Table 46. WS*155, 200 standard motor and high static drive accessory/fan speed (rpm)**

| Unit Model No. | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1Turns Open | Closed |
|---|---|---|---|---|---|---|---|
| WS*155ED | 571 | 602 | 633 | 663 | 694 | 725 | N/A |
| WS*200ED | 574 | 611 | 648 | 685 | 722 | 759 | N/A |

**Note:** * indicates both horizontal and downflow units

**Table 47. WS*155, 200 oversized motor and drive/fan speed (rpm)**

| Unit Model No. | 6 Turns Open | 5 Turns Open | 4 Turns Open | 3 Turns Open | 2 Turns Open | 1Turns Open | Closed |
|---|---|---|---|---|---|---|---|
| WS*155ED | 621 | 667 | 698 | 728 | 759 | 850 | N/A |
| WS*200ED | 702 | 740 | 777 | 814 | 851 | 891 | N/A |

**Note:** * indicates both horizontal and downflow units

**Table 48. T/YS*155–250—static pressure drops through accessories—pascals**

| Unit Model No. | Airflow $m^3/h$ | Standard Filters | Economizer with OA/RA Dampers[a] | | Electric Heater - Nom kW[b] | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 100% OA | 100% RA | 5-12 | 14-27 | 33-41 | 45-54 |
| D155 | 7140 | 6 | 8 | 5 | 7 | 9 | 10 | — |
| D155 | 8500 | 9 | 11 | 7 | 9 | 12 | 15 | — |
| D155 | 9860 | 12 | 15 | 10 | 12 | 16 | 20 | — |
| H155 | 7140 | 6 | 8 | 5 | 7 | 9 | 10 | — |
| H155 | 8500 | 9 | 11 | 7 | 9 | 12 | 15 | — |
| H155 | 9860 | 12 | 15 | 10 | 12 | 16 | 20 | — |
| D175 | 7985 | 7 | 10 | 7 | 8 | 10 | 13 | — |
| D175 | 9515 | 11 | 14 | 9 | 12 | 15 | 18 | — |
| D175 | 11045 | 14 | 18 | 12 | 16 | 20 | 24 | — |
| H175 | 7985 | 7 | 10 | 7 | 8 | 10 | 13 | — |
| H175 | 9515 | 11 | 14 | 9 | 12 | 15 | 18 | — |
| H175 | 11045 | 14 | 18 | 12 | 16 | 20 | 24 | — |
| D200 | 9005 | 12 | 29 | 6 | — | 11 | 14 | 16 |
| D200 | 10875 | 18 | 42 | 9 | — | 16 | 21 | 23 |
| D200 | 12745 | 24 | 57 | 13 | — | 22 | 29 | 31 |
| H200 | 9005 | 10 | 33 | 6 | — | 11 | 14 | 16 |
| H200 | 10875 | 15 | 48 | 9 | — | 16 | 21 | 23 |
| H200 | 12745 | 21 | 66 | 13 | — | 22 | 29 | 31 |
| D250 | 11380 | 20 | 46 | 9 | — | 17 | 22 | 25 |
| D250 | 13590 | 28 | 66 | 13 | — | 24 | 31 | 36 |
| D250 | 15800 | 38 | 89 | 18 | — | 33 | 42 | 49 |
| H250 | 11380 | 16 | 52 | 9 | — | 17 | 22 | 25 |
| H250 | 13590 | 23 | 75 | 13 | — | 24 | 31 | 36 |
| H250 | 15800 | 31 | 101 | 18 | — | 33 | 42 | 49 |

(a) OA = Outside Air, RA = Return Air
(b) Nominal kW ratings are at 415 V. Not all Heater sizes may be available.
* Indicates both horizontal and downflow units.

**Table 49. T/YS*155–250—static pressure drops through accessories—(inches water column)**

| Unit Model No. | Airflow CFM | Standard Filters | Economizer with OA/RA Dampers[a] | | Electric Heater - Nom kW[b] | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 100% OA | 100% RA | 5-12 | 14-27 | 33-41 | 45-54 |
| D155 | 4200 | 0.02 | 0.03 | 0.02 | 0.03 | 0.03 | 0.04 | — |
| D155 | 5000 | 0.04 | 0.05 | 0.03 | 0.04 | 0.05 | 0.06 | — |
| D155 | 5800 | 0.05 | 0.06 | 0.04 | 0.05 | 0.07 | 0.08 | — |
| H155 | 4200 | 0.02 | 0.03 | 0.02 | 0.03 | 0.03 | 0.04 | — |
| H155 | 5000 | 0.04 | 0.05 | 0.03 | 0.04 | 0.05 | 0.06 | — |
| H155 | 5800 | 0.05 | 0.06 | 0.04 | 0.05 | 0.07 | 0.08 | — |
| D175 | 4700 | 0.03 | 0.04 | 0.03 | 0.03 | 0.04 | 0.05 | — |
| D175 | 5600 | 0.04 | 0.06 | 0.04 | 0.05 | 0.06 | 0.07 | — |
| D175 | 6500 | 0.06 | 0.07 | 0.05 | 0.06 | 0.08 | 0.10 | — |
| H175 | 4700 | 0.03 | 0.04 | 0.03 | 0.03 | 0.04 | 0.05 | — |
| H175 | 5600 | 0.04 | 0.06 | 0.04 | 0.05 | 0.06 | 0.07 | — |
| H175 | 6500 | 0.06 | 0.07 | 0.05 | 0.06 | 0.08 | 0.10 | — |
| D200 | 5300 | 0.05 | 0.11 | 0.03 | — | 0.04 | 0.06 | 0.06 |
| D200 | 6400 | 0.07 | 0.17 | 0.04 | — | 0.06 | 0.08 | 0.09 |
| D200 | 7500 | 0.10 | 0.23 | 0.05 | — | 0.09 | 0.11 | 0.13 |
| H200 | 5300 | 0.04 | 0.13 | 0.03 | — | 0.04 | 0.06 | 0.06 |
| H200 | 6400 | 0.06 | 0.19 | 0.04 | — | 0.06 | 0.08 | 0.09 |
| H200 | 7500 | 0.08 | 0.26 | 0.05 | — | 0.09 | 0.11 | 0.13 |
| D250 | 6700 | 0.08 | 0.19 | 0.04 | — | 0.07 | 0.09 | 0.10 |
| D250 | 8000 | 0.11 | 0.27 | 0.05 | — | 0.10 | 0.12 | 0.15 |
| D250 | 9300 | 0.15 | 0.36 | 0.07 | — | 0.13 | 0.17 | 0.20 |
| H250 | 6700 | 0.06 | 0.21 | 0.04 | — | 0.07 | 0.09 | 0.10 |
| H250 | 8000 | 0.09 | 0.30 | 0.05 | — | 0.10 | 0.12 | 0.15 |
| H250 | 9300 | 0.13 | 0.40 | 0.07 | — | 0.13 | 0.17 | 0.20 |

(a) OA = Outside Air, RA = Return Air
(b) Nominal kW ratings are at 415 V. Not all Heater sizes may be available.
* Indicates both horizontal and downflow units.

**Table 50. WS*155, 200—static pressure drops through accessories—pascals**

| Unit Model No. | Airflow $m^3/h$ | Standard Filters | Economizer with OA/RA Dampers[a] | | Electric Heater - Nom kW[b] | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 100% OA | 100% RA | 5-14 | 16-27 | 33-41 | 45-54 |
| D155 | 6800 | 6 | 45 | 5 | 7 | 7 | 10 | — |
| D155 | 8500 | 8 | 62 | 5 | 10 | 12 | 15 | — |
| D155 | 10200 | 11 | 87 | 7 | 17 | 20 | 22 | — |
| H155 | 6800 | 6 | 45 | 5 | 7 | 7 | 10 | — |
| H155 | 8500 | 8 | 62 | 5 | 10 | 12 | 15 | — |
| H155 | 10200 | 11 | 87 | 7 | 17 | 20 | 22 | — |
| D200 | 8970 | 8 | 37 | 5 | — | 10 | 12 | 15 |
| D200 | 11210 | 14 | 57 | 7 | — | 17 | 20 | 22 |
| D200 | 13450 | 19 | 77 | 12 | — | 25 | 27 | 35 |
| H200 | 8970 | 8 | 50 | 7 | — | 12 | 15 | 17 |
| H200 | 11210 | 15 | 75 | 10 | — | 22 | 27 | 32 |
| H200 | 13450 | 24 | 124 | 17 | — | 37 | 42 | 52 |

(a) OA = Outside Air, RA = Return Ai
(b) Nominal kW ratings are at a 415 V
* Indicates both horizontal and downflow units.

**Table 51. WS*155, 200—static pressure drops through accessories—(inches water column)**

| Unit Model No. | Airflow CFM | Standard Filters | Economizer with OA/RA Dampers[a] | | Electric Heater - Nom kW[b] | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 100% OA | 100% RA | 5-14 | 16-27 | 33-41 | 45-54 |
| D155 | 4000 | 0.02 | 0.18 | 0.02 | 0.03 | 0.03 | 0.04 | — |
| D155 | 5000 | 0.03 | 0.25 | 0.02 | 0.04 | 0.05 | 0.06 | — |
| D155 | 6000 | 0.05 | 0.35 | 0.03 | 0.07 | 0.08 | 0.09 | — |
| H155 | 4000 | 0.02 | 0.18 | 0.02 | 0.03 | 0.03 | 0.04 | — |
| H155 | 5000 | 0.03 | 0.25 | 0.02 | 0.04 | 0.05 | 0.06 | — |
| H155 | 6000 | 0.05 | 0.35 | 0.03 | 0.07 | 0.08 | 0.09 | — |
| D200 | 5200 | 0.03 | 0.15 | 0.02 | — | 0.04 | 0.05 | 0.06 |
| D200 | 6600 | 0.05 | 0.23 | 0.03 | — | 0.07 | 0.08 | 0.09 |
| D200 | 8000 | 0.07 | 0.31 | 0.05 | — | 0.10 | 0.11 | 0.14 |
| H200 | 5200 | 0.03 | 0.20 | 0.03 | — | 0.05 | 0.06 | 0.07 |
| H200 | 6600 | 0.06 | 0.30 | 0.04 | — | 0.09 | 0.11 | 0.13 |
| H200 | 8000 | 0.10 | 0.50 | 0.07 | — | 0.15 | 0.17 | 0.21 |

(a) OA = Outside Air, RA = Return Ai
(b) Nominal kW ratings are at a 415 V
* Indicates both horizontal and downflow units.

# Controls

## ReliaTel Controlled Units

*Note: Zone sensor required for units configured for Single Zone VAV indoor fan system control to enable Single Zone VAV functionality.*

Zone Sensors are the building occupant's comfort control devices. They replace the conventional electro-mechanical thermostats. The following zone sensor options are available for Voyager units:

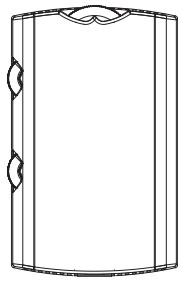
### Differential Enthalpy

Differential Enthalphy Replaces the standard dry bulb control with two enthalpy sensors that compare total heat content of the indoor air and outdoor air to determine the most efficient air source. This control option offers the highest level of comfort control, plus energy efficiency, available.

### Differential Pressure Switches

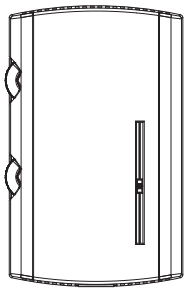
This factory or field-installed option allows individual fan failure and dirty filter indication. The fan failure switch will disable all unit functions and "flash" the Service LED on the zone sensor. The dirty filter switch will light the Service LED on the zone sensor and will allow continued unit operation.

### Manual Changeover



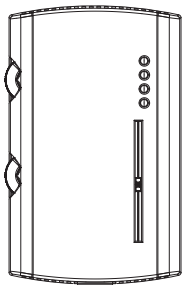
Heat, Cool or Off System Switch. Fan Auto or Off Switch. One temperature setpoint lever.

### Manual/Automatic Changeover



Auto, Heat, Cool or Off System Switch. Fan Auto or Off Switch. Two temperature setpoint levers.

### Manual/Automatic Changeover

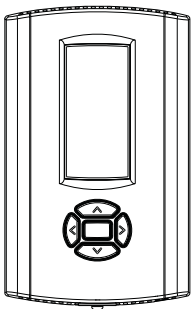


Auto, Heat, Cool or Off System Switch. Fan Auto or Off Switch. Two temperature setpoint levers. Status Indication LED lights, System On, Heat, Cool, or Service.

### RA Remote Sensor & Room Remote Sensor

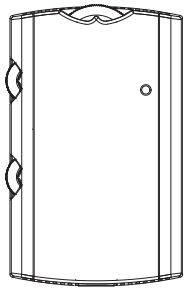
The RA Remote Sensor is a Return Air Remote Sensor which can be mounted in the return air duct to report return air temperature. The Room Remote Sensor is a Space Remote Sensor which can be mounted on the wall to report/control from a remote location in the space.

### Wireless Zone Sensor



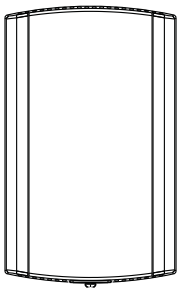
LCD display that provides heat, cool, auto, or off. Includes two temperature setpoints and a lockable setting with °F or °C indicators.

### Manual/Automatic Changeover



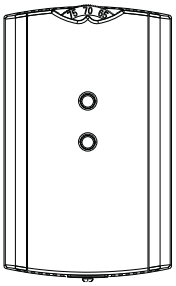
Auto, Heat, Cool or Off System Switch. Fan Auto or Off Switch. Two temperature setpoint levers.

### Remote Sensor



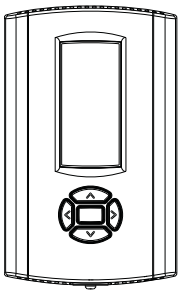
Sensor(s) available for all zone sensors to provide remote sensing capabilities.

### Integrated Comfort™ System



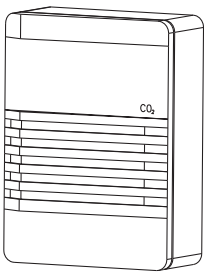
Sensor(s) available with optional temperature adjustment and override buttons to provide central control through a Trane Integrated Comfort™ system.

### Programmable Night Setback



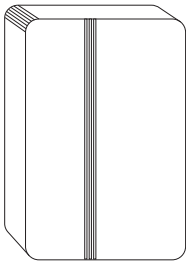
Auto or manual changeover with seven-day programming. Keyboard selection of Heat, Cool, Fan, Auto, or On. All programmable sensors have System On, Heat, Cool, Service LED/indicators as standard. Night Setback Sensors have one (1) Occupied, one (1) Unoccupied, and one (1) Override program per day.

### $CO_2$ Sensing



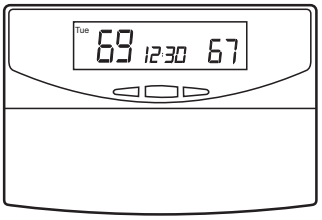

The $CO_2$ sensor shall have the ability to monitor space occupancy levels within the building by measuring the parts per million of $CO_2$ (Carbon Dioxide) in the air. As the $CO_2$ levels increase, the outside air damper modulates to meet the $CO_2$ space ventilation requirements. The $CO_2$ accessory shall be available as field installed.

### Humidity Sensor



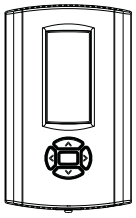
Field installed, wall-mounted or duct-mounted humidity sensor is used to control activation of the hot gas reheat dehumidification option. The humidity sensor can be set for humidity levels between 40 percent and 60 percent relative humidity by adjusting the ReliaTel Options Module.

### Digital Display Programmable Thermostat with Built-In Relative Humidity Sensing (3H/2C)



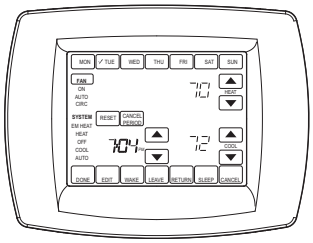

Three Heat/Two Cool digital display thermostat with built-in humidity control and display. This thermostat combines both humidity and dry bulb into one. Fully programmable with night setback.

### Digital Display Programmable Thermostat (3H/2C)



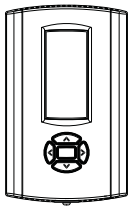
Two Heat/Two Cool auto changeover digital display thermostat. Seven-day programmable stat with night setback shall be available.

### Touchscreen Programmable Thermostat (2H/2C)




Two Heat/Two Cool programmable thermostat with touch screen digital display. Menu-driven programming. Effortless set-up. Program each day separately with no need to copy multiple days. All programming can be done on one screen. Easy to read and use. Large, clear backlit digital display.

### Digital Display Thermostat (3H/2C)



Three Heat, Two Cool auto changeover digital display thermostat.

### Remote Potentiometer

Minimum position setting of economizer can be remotely adjusted with this accessory.

### Trane Communication Interface (TCI)

This factory or field-installed micro-processor interface allows the unit to communicate to Trane's Integrated Comfort™ system.

### Economizer Controls

The standard equipment offering is a fixed dry bulb changeover control. In addition, there are two optional controls, Enthalpy and Differential Enthalpy Control.

### Enthalpy Control

Replaces the dry bulb control with a wet bulb changeover controller which has a fully adjustable setpoint. Enthalpy control offers a higher level of comfort control, along with energy savings potential, than the standard dry bulb control. This is due to the additional wet bulb sensing capability.

# Electrical Data

**Table 52. TS* auxiliary electric heat capacity**

| Unit Model No. | Total heater kW(1)(2) | No. of Stages | Stage 1 heater kW(1) | Stage 2 heater kW(1) |
|---|---|---|---|---|
| TS*155FD | 26.9 | 2 | 13.4 | 13.4 |
| TS*175FD | 26.9 | 2 | 13.4 | 13.4 |
| | 40.3 | 2 | 26.9 | 13.4 |
| TS*200FD | 26.9 | 2 | 13.4 | 13.4 |
| TS*250FD | 40.3 | 2 | 26.9 | 13.4 |
| | 53.8 | 2 | 26.9 | 26.9 |

**Notes:**
1. Heaters are rated at 415 V. For other than rated voltage, apply the following formula - kW = (Required Voltage/415)$^2$ x Rated kW.
2. Not all Heater Models are available.
3. To calculate temperature rise across the electric heat use the following formulas:
   Temp Rise Across Electric Heater - °C = 2982 * Heater Capacity (kW)/Airflow ($m^3$/h)
   Temp Rise Across Electric Heater - °F = 3160 * Heater Capacity (kW)/Airflow (cfm)

**Table 53. TS* electric heater voltage correction factors (apply to auxiliary electric heat capacity)**

| Nominal Voltage | Distribution Voltage | Capacity Multiplier |
|---|---|---|
| 415 | 380 | 0.84 |
| | 400 | 0.93 |
| | 415 | 1.00 |

**Table 54. TS* unit wiring**

| Unit Model | Voltage | Standard Indoor Fan Motor—MCA | Oversize Indoor Fan Motor—MCA |
|---|---|---|---|
| TS*155FD | 380–415 | 41.0 | 44.0 |
| TS*175FD | 380–415 | 51.0 | 54.0 |
| TS*200FD | 380–415 | 56.0 | 59.0 |
| TS*250FD | 380–415 | 65.0 | — |

**Table 55. TS* unit wiring with electric heat (single point connection)**

| Unit Model to Use With | Heater kW Rating | Unit Supply Power | Control Stages | Standard Indoor Motor MCA | Oversized Motor MCA |
|---|---|---|---|---|---|
| TS*155ED | 11.3–13.5 | 380–415/50/3 | 1 | 41/41 | 44/44 |
| TS*155FD | 22.6–26.9 | 380–415/50/3 | 2 | 49/53 | 53/57 |
| TS*155FD | 33.8–40.4 | 380–415/50/3 | 2 | 71/77 | 74/80 |
| TS*175FD | 22.6–26.9 | 380–415/50/3 | 2 | 53/57 | 57/61 |
| TS*175FD | 33.8–40.4 | 380–415/50/3 | 2 | 74/80 | 79/84 |
| TS*200FD | 22.6–26.9 | 380–415/50/3 | 2 | 56/57 | 59/61 |
| TS*200FD | 33.8–40.4 | 380–415/50/3 | 2 | 74/80 | 79/84 |
| TS*200FD | 45.1–53.8 | 380–415/50/3 | 2 | 96/104 | 100/108 |
| TS*250FD | 22.6–26.9 | 380–415/50/3 | 2 | 65/65 | — |
| TS*250FD | 33.8–40.4 | 380–415/50/3 | 2 | 79/84 | — |
| TS*250FD | 45.1–53.8 | 380–415/50/3 | 2 | 100/108 | — |

**Note:** * All units to be installed under local codes.

**Table 56. TS* electric characteristics—evaporator fan motor—50 cycle**

| | Standard Evaporator Motor | | | | | | | Oversize Evaporator Motor | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | No. Motors | Volts | Ph | Watts | FLA | LRA | Service Factor | No. Motors | Volts | Ph | Watts | FLA | LRA | Service Factor |
| TS*155FD | 1 | 380–415 | 3 | 1500 | 4.6 | 36.4 | 1.15 | 1 | 380–415 | 3 | 2200 | 6.5 | 57 | 1.15 |
| TS*175FD | 1 | 380–415 | 3 | 2200 | 6.5 | 57.0 | 1.15 | 1 | 380–415 | 3 | 3700 | 7.4 | 71.9 | 1.15 |
| TS*200FD | 1 | 380–415 | 3 | 2200 | 6.5 | 57.0 | 1.15 | 1 | 380–415 | 3 | 3700 | 7.0 | 65.1 | 1.15 |
| TS*250FD | 1 | 380–415 | 3 | 3700 | 7.4 | 71.9 | 1.15 | — | — | — | — | — | — | — |

**Table 57. TS* electric characteristics—compressor motor and condenser motor—50 cycle**

| | Compressor Motors | | | | | | | Condenser Fan Motors | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Amps(a) | | | | | Amps[a] | |
| Unit Model No. | No. | Volts | Ph | Watts | rpm | RLA | LRA | No. | Ph | Watts | FLA | LRA |
| TS*155FD | 2 | 380–415/50 | 3 | /4610 | 2900 | 17 | 142 | 2 | 1 | 300 | 1.6 | 3.8 |
| TS*175FD | 2 | 380–415/50 | 3 | /4460 | 2900 | 21.4 | 142 | 2 | 1 | 560 | 2.5 | 5.8 |
| TS*200FD | 2 | 380–415/50 | 3 | | 2900 | 22.1 | 147 | 2 | 1 | 560 | 2.5 | 5.8 |
| TS*250FD | 2 | 380–415/50 | 3 | | 2900 | 21.4 | 142 | 2 | 1 | 665 | 2.5 | 5.8 |

(a) For Compressor Motors and Condenser Fan Motors: Amp draw for each motor; multiply value by number of motors to determine total amps.
*Indicates both downflow and horizontal units.

**Table 58. YS* unit wiring**

| Unit Model | Voltage | Standard Indoor Fan Motor—MCA | Oversize Indoor Fan Motor—MCA |
|---|---|---|---|
| YS*155FD | 380–415 | 41.0 | 44.0 |
| YS*175FD | 380–415 | 51.0 | 54.0 |
| YS*200FD | 380–415 | 56.0 | 59.0 |
| YS*250FD | 380–415 | 65.0 | — |

**Table 59. YS* electric characteristics—evaporator fan motor—50 cycle**

| | Standard Evaporator Motor | | | | | | | Oversize Evaporator Motor | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | No. Motors | Volts | Ph | Watts | FLA | LRA | Service Factor | No. Motors | Volts | Ph | Watts | FLA | LRA | Service Factor |
| YS*155FD | 1 | 380–415 | 3 | 1500 | 4.6 | 36.4 | 1.15 | 1 | 380/415 | 3 | 2200 | 6.5 | 57 | 1.15 |
| YS*175FD | 1 | 380–415 | 3 | 2200 | 6.5 | 57.0 | 1.15 | 1 | 380/415 | 3 | 3700 | 7.4 | 71.9 | 1.15 |
| YS*200FD | 1 | 380–415 | 3 | 2200 | 6.5 | 57.0 | 1.15 | 1 | 380/415 | 3 | 3700 | 7.0 | 65.1 | 1.15 |
| YS*250FD | 1 | 380–415 | 3 | 3700 | 7.4 | 71.9 | 1.15 | — | — | — | — | — | — | — |

**Table 60. YS* electric characteristics—compressor motor and condenser motor—50 cycle**

| | Compressor Motors | | | | | | | Condenser Fan Motors | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Amps(a) | | | | | Amps[a] | |
| Unit Model No. | No. | Volts | Ph | Watts | rpm | RLA | LRA | No. | Ph | Watts | FLA | LRA |
| YS*155FD | 2 | 380–415/50 | 3 | /4610 | 2900 | 17 | 142 | 2 | 1 | 300 | 1.6 | 3.8 |
| YS*175FD | 2 | 380–415/50 | 3 | /4460 | 2900 | 21.4 | 142 | 2 | 1 | 560 | 2.5 | 5.8 |
| YS*200FD | 2 | 380–415/50 | 3 | | 2900 | 22.1 | 147 | 2 | 1 | 560 | 2.5 | 5.8 |
| YS*250FD | 2 | 380–415/50 | 3 | | 2900 | 21.4 | 142 | 2 | 1 | 665 | 2.5 | 5.8 |

(a) For Compressor Motors and Condenser Fan Motors: Amp draw for each motor; multiply value by number of motors to determine total amps.
*Indicates both downflow and horizontal units.

**Table 61. YS* electrical characteristics—combustion blower motor**

| Model | Heat | Heating Stages | Watts | RPM | Volts | Phase | FLA | LRA |
|---|---|---|---|---|---|---|---|---|
| YS*155FD | Low | 2 | 75 | 3500/3000 | 230 | 1 | 0.8 | 2.0 |
| YS*155FD | High | 2 | 75 | 3500/3000 | 230 | 1 | 0.6 | 1.5 |
| YS*175FD | Low | 2 | 75 | 3500/3000 | 230 | 1 | 0.8 | 2.0 |
| YS*175FD | High | 2 | 75 | 3500/3000 | 230 | 1 | 0.6 | 1.5 |
| YS*200FD | Low | 2 | 75 | 3500/3000 | 230 | 1 | 0.8 | 2.0 |
| YS*200FD | High | 2 | 75 | 3500/3000 | 230 | 1 | 0.6 | 1.5 |
| YS*250FD | Low | 2 | 75 | 3500/3000 | 230 | 1 | 0.8 | 2.0 |
| YS*250FD | High | 2 | 75 | 3500/3000 | 230 | 1 | 0.6 | 1.5 |

**Table 62. WS* auxiliary electric heat capacity**

| Unit Model No. | Total heater kW(1)(2) | No. of Stages | Stage 1 heater kW(1) | Stage 2 heater kW(1) |
|---|---|---|---|---|
| WS*155ED | 40.3 | 2 | 26.9 | 13.4 |
| WS*155ET | 37.5 | 2 | 25.0 | 12.5 |
| WS*200ED | 26.9 | 2 | 13.4 | 13.4 |
| | 40.3 | 2 | 26.9 | 13.4 |
| | 53.8 | 2 | 26.9 | 26.9 |
| WS*200ET | 25.0 | 1 | 25.0 | — |
| | 37.5 | 2 | 25.0 | 12.5 |
| | 50.0 | 2 | 25.0 | 25.0 |

**Notes:**
1. Heaters are rated at 415 V. For other than rated voltage, apply the following formula - kW = (Required Voltage/415)$^2$ x Rated kW.
2. Not all Heater Models are available.
3. To calculate temperature rise across the electric heat use the following formulas:
   Temp Rise Across Electric Heater - °C = 2982 * Heater Capacity (kW)/Airflow ($m^3/h$)
   Temp Rise Across Electric Heater - °F = 3160 * Heater Capacity (kW)/Airflow (cfm)

**Table 63. WS* electric heater voltage correction factors (apply to auxiliary electric heat capacity)**

| Nominal Voltage | Distribution Voltage | Capacity Multiplier |
|---|---|---|
| 200 | 200 | 1.00 |
| 415 | 380 | 0.84 |
| | 400 | 0.93 |
| | 415 | 1.00 |

**Table 64. WS* unit wiring**

| Unit Model | Voltage | MCA | |
|---|---|---|---|
| | | Standard Indoor Fan Motor—MCA | Oversize Indoor Fan Motor—MCA |
| WS*155ED | 380–415/50/3 | 40.0 | 43.0 |
| WS*155ET | 200/50/3 | 83.0 | — |
| WS*200ED | 380–415/50/3 | 59.0 | 62.0 |
| WS*200ET | 200/50/3 | 115.0 | — |

**Table 65. WS* unit wiring with electric heat (single point connection)**

| Models | Heater kW Rating | Unit Supply Power | Control Stages | MCA | |
|---|---|---|---|---|---|
| | | | | Standard Indoor Motor MCA | Oversized Motor MCA |
| WS*155ED | 22.6–26.9 | 380–415/50/3 | 1 | 60–63 | 64–66 |
| | 33.8–40.4 | 380–415/50/3 | 2 | 83–87 | 86–90 |
| | 45.1–53.8 | 380–415/50/3 | 2 | 104–110 | 107–113 |
| WS*155ET | 12.5 | 200/50/3 | 1 | 128 | — |
| | 25.0 | 200/50/3 | 1 | 173 | — |
| | 37.5 | 200/50/3 | 2 | 219 | — |
| WS*200ED | 22.6–26.9 | 380–415/50/3 | 2 | 102–105 | 105–109 |
| | 33.8–40.4 | 380–415/50/3 | 2 | 123–129 | 126–132 |
| | 45.1–53.8 | 380–415/50/3 | 2 | 144–152 | 148–156 |
| WS*200ET | 25.0 | 200/50/3 | 1 | 206 | — |
| | 37.5 | 200/50/3 | 2 | 251 | — |
| | 50.0 | 200/50/3 | 2 | 296 | — |

**Note:** * All units to be installed under local codes.

**Table 66. WS* electric characteristics—evaporator fan motor—50 cycle**

| Model | Standard Evaporator Motor | | | | | | | Oversize Evaporator Motor | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. Motors | Volts | Ph | Watts | FLA | LRA | Service Factor | No. Motors | Volts | Ph | Watts | FLA | LRA | Service Factor |
| WS*155ED | 1 | 380–415/50/3 | 3 | 1500 | 4.6 | 36.4 | 1.15 | 1 | 380–415/50/3 | 3 | 2200 | 5.7 | 57.0 | 1.5 |
| WS*155ET | 1 | 200/50/3 | 3 | 2200 | 10.8 | 108 | 1.5 | — | — | — | — | — | — | — |
| WS*200ED | 1 | 380–415/50/3 | 3 | 2200 | 5.7 | 57.0 | 1.5 | 1 | 380–415/50/3 | 3 | 3700 | 7.4 | 71.9 | 1.15 |
| WS*200ET | 1 | 200/50/3 | 3 | 3700 | 16.6 | 120 | 1.15 | — | — | — | — | — | — | — |

**Table 67. WS* electric characteristics—compressor motor and condenser motor—50 cycle**

| Unit Model No. | Compressor Motors | | | | | | | Condenser Fan Motors | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Amps(a) | | | | | Amps[a] | |
| | No. | Volts | Ph | Watts | rpm | RLA | LRA | No. | Ph | Watts | FLA | LRA |
| WS*155ED | 2 | 380–415/50 | 3 | 6400 | 2900 | 14 | 101 | 2 | 1 | 300 | 1.6 | 3.8 |
| WS*155ET | 2 | 200/50 | 3 | 6400 | 2900 | 28 | 179 | 2 | 1 | 300 | 2.6 | 8.7 |
| WS*200ED | 2 | 380–415/50 | 3 | | 2900 | 19.9 | 142 | 2 | 1 | 665 | 2.5 | 5.8 |
| WS*200ET | 2 | 200/50 | 3 | | 2900 | 43 | 267 | 2 | 1 | 665 | 4.4 | 14.8 |

(a) For Compressor Motors and Condenser Fan Motors: Amp draw for each motor; multiply value by number of motors to determine total amps.
*Indicates both downflow and horizontal units.

# Typical Wiring

**Figure 2. TS*155F–250F**

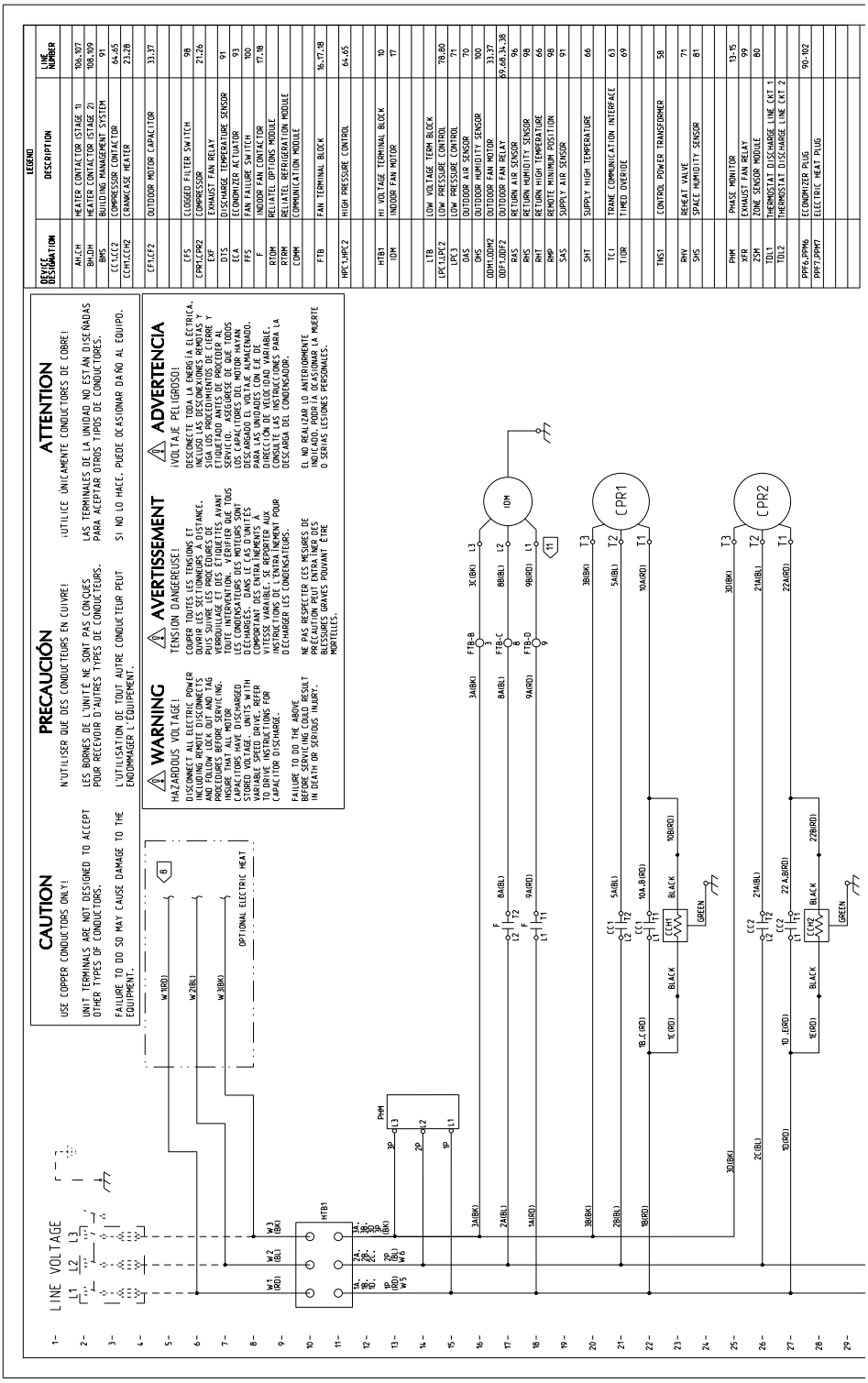


**Figure 2. (continued from previous page) TS*155F–250F**

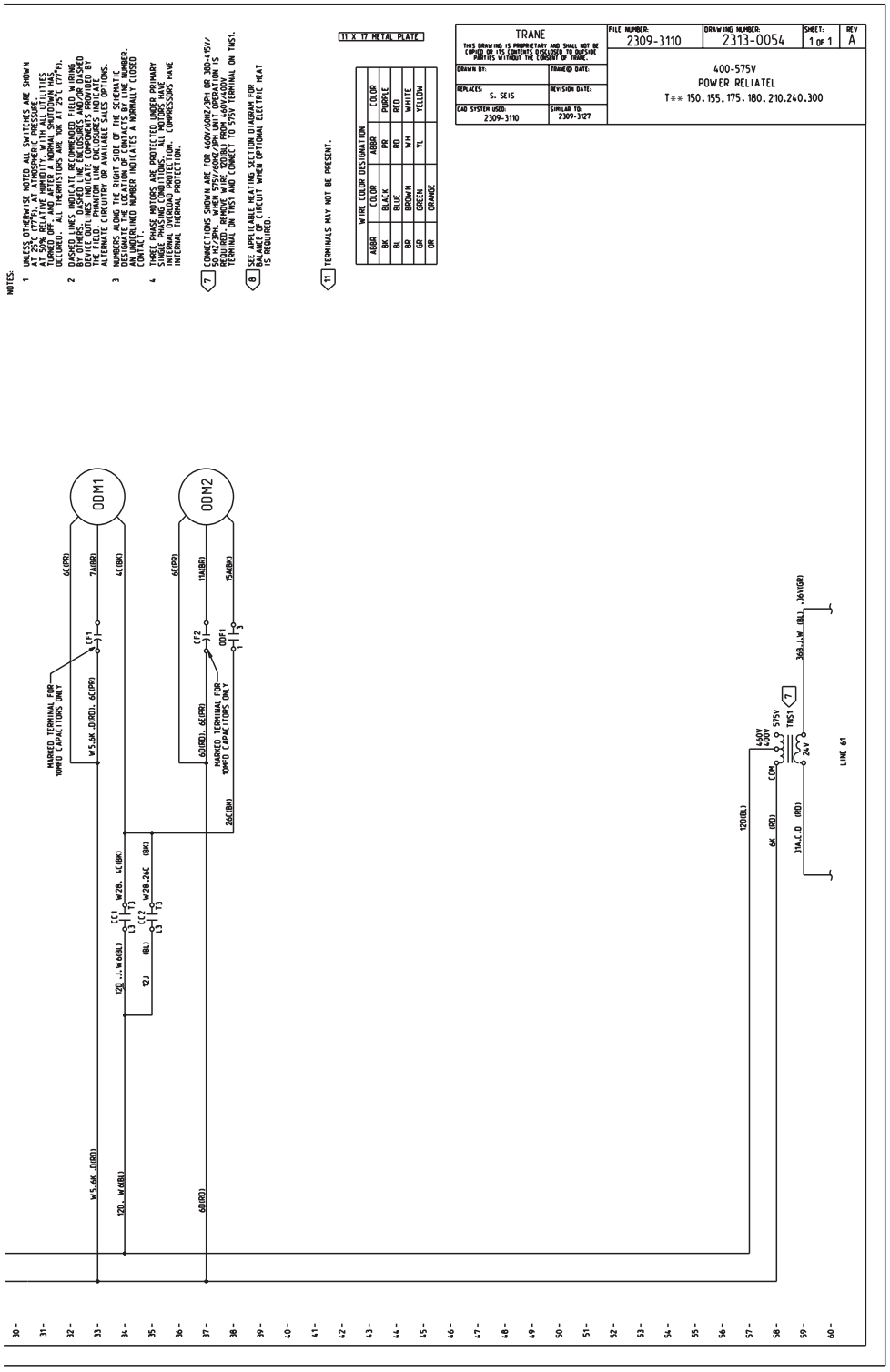


**Figure 3. TS*200F–250F**

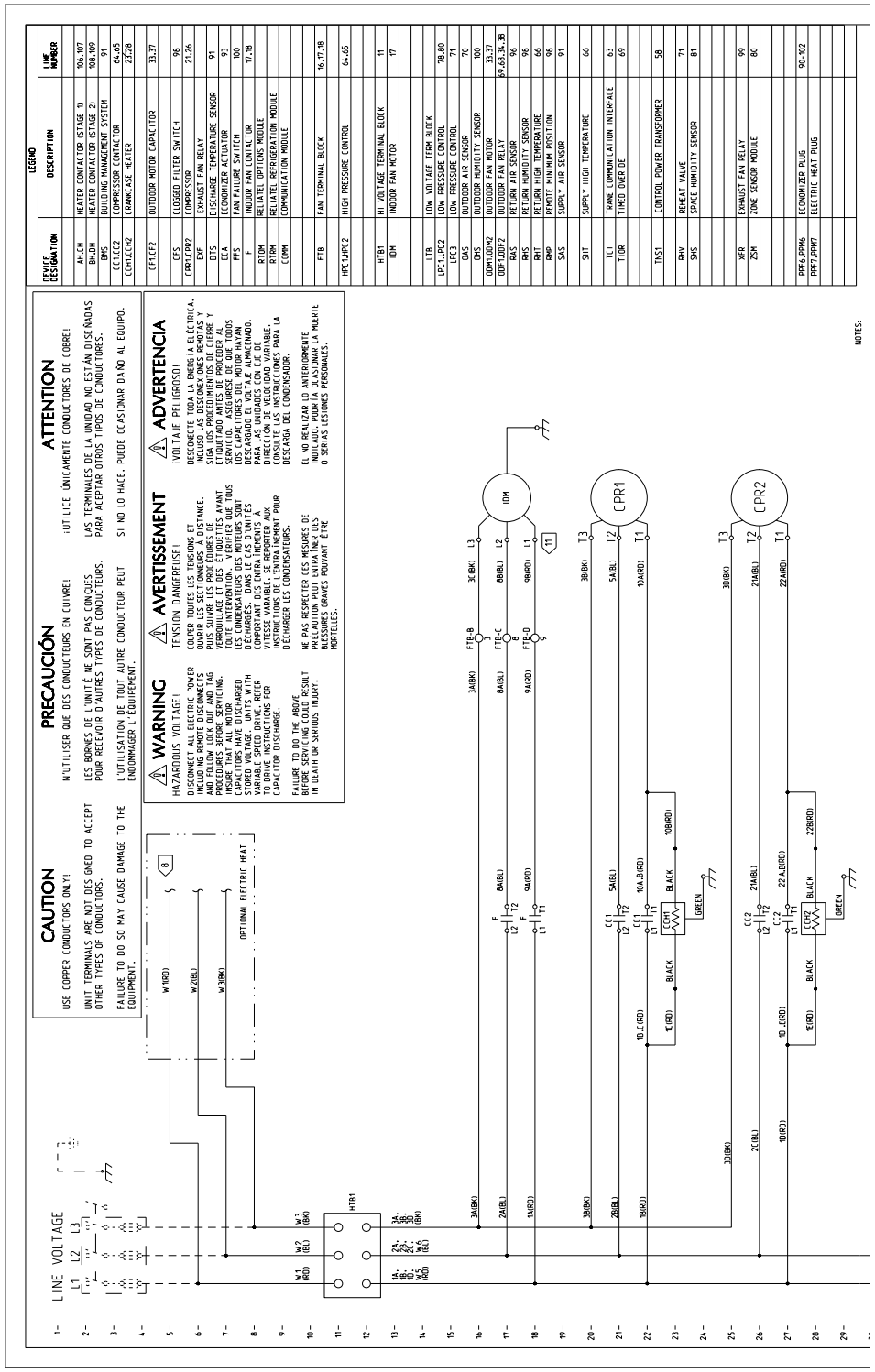
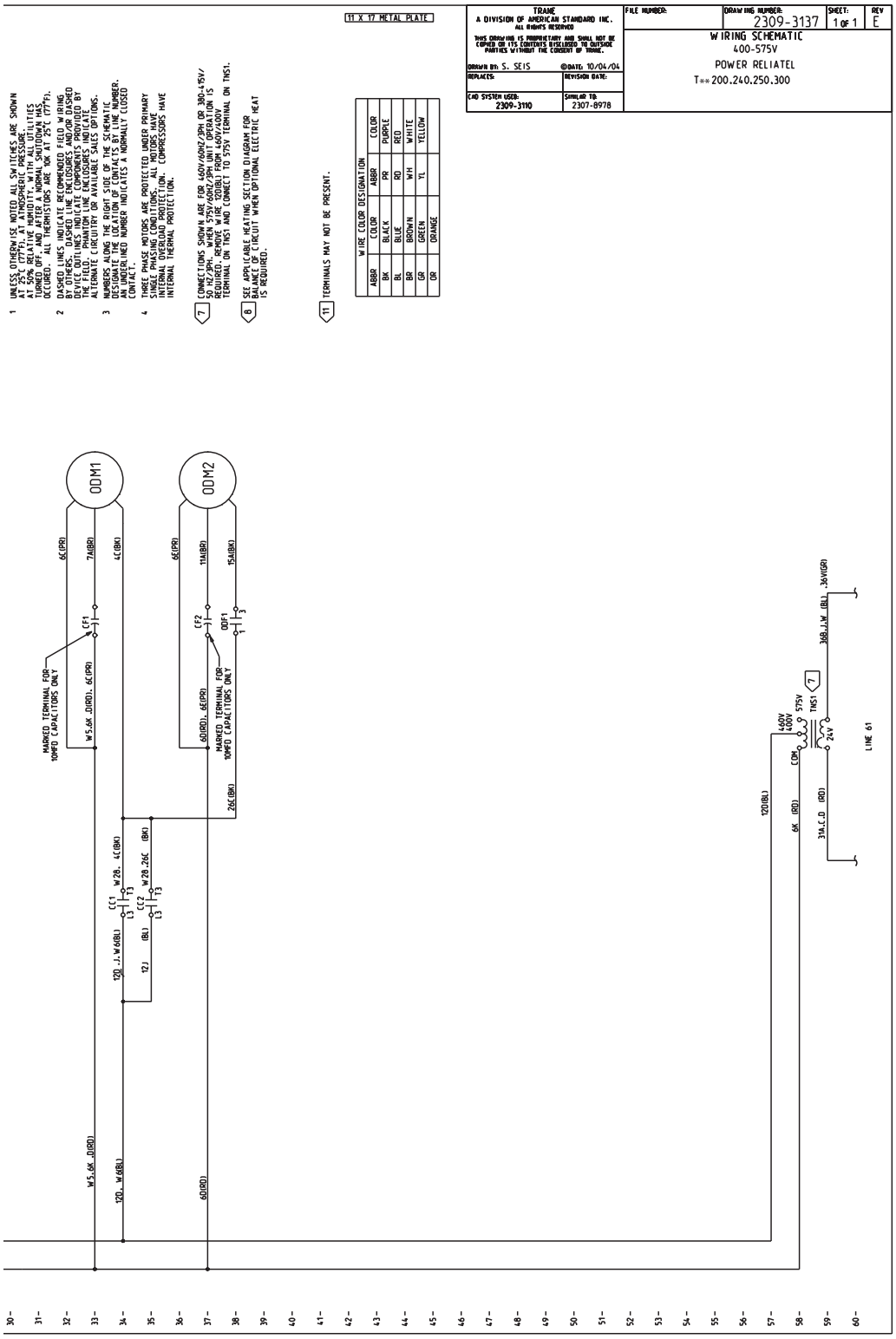


**Figure 3. (continued from previous page) TS*200F–250F**



# Typical Wiring

**Figure 4. YS*155F–250F**

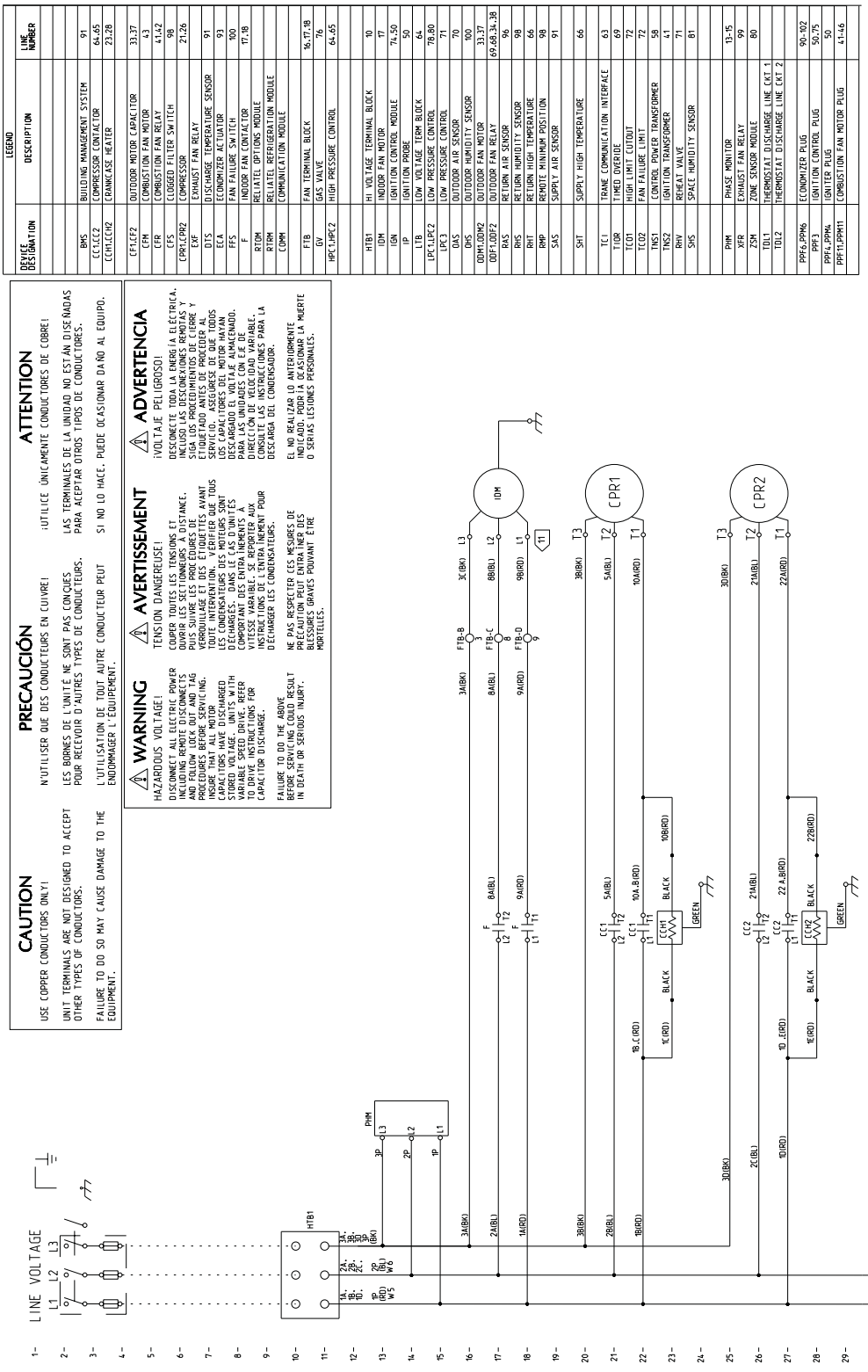

CAUTION
USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.
PRECAUCIÓN
NO UTILISER QUE DES CONDUCTEURS EN CUIVRE!
LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'ÉQUIPEMENT.
ATTENTION
UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.
WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCKOUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE.
FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.
AVERTISSEMENT
TENSION DANGEREUSE!
COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS À DISTANCE. PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET D'ÉTIQUETAGE AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS.
NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.
ADVERTENCIA
¡VOLTAJE PELIGROSO!
DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGÚRESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON UN IMPULSO DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR.
EL NO REALIZAR LO ANTERIORMENTE INDICADO PUEDE OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.
LEGEND
DEVICE DESIGNATION
DESCRIPTION
LINE NUMBER
BMS BUILDING MANAGEMENT SYSTEM 91
CC1,CC2 COMPRESSOR CONTACTOR 64,65
CCH1,CCH2 CRANKCASE HEATER 23,28
CF1,CF2 OUTDOOR MOTOR CAPACITOR 33,37
CFM COMBUSTION FAN MOTOR 43
CFR COMBUSTION FAN RELAY 41,42
CFS CLOGGED FILTER SWITCH 98
CPR1,CPR2 COMPRESSOR 21,26
EXF EXHAUST FAN RELAY
DTS DISCHARGE TEMPERATURE SENSOR 91
ECA ECONOMIZER ACTUATOR 93
FFS FAN FAILURE SWITCH 100
F INDOOR FAN CONTACTOR 17,18
RTDM RELIATEL OPTIONS MODULE
RTRM RELIATEL REFRIGERATION MODULE
COMM COMMUNICATION MODULE
FTB FAN TERMINAL BLOCK 16,77,78
GV GAS VALVE 76
HPC1,HPC2 HIGH PRESSURE CONTROL 64,65
HTB1 HI VOLTAGE TERMINAL BLOCK 10
IDM INDOOR FAN MOTOR 17
IGN IGNITION CONTROL MODULE 74,50
IP IGNITION PROBE 50
LTB LOW VOLTAGE TERM BLOCK 64
LPC1,LPC2 LOW PRESSURE CONTROL 78,80
LPC3 LOW PRESSURE CONTROL 71
OAS OUTDOOR AIR SENSOR 70
OHS OUTDOOR HUMIDITY SENSOR 100
ODM1,ODM2 OUTDOOR FAN MOTOR 33,37
ODF1,ODF2 OUTDOOR FAN RELAY 69,68,34,38
RAS RETURN AIR SENSOR 96
RHS RETURN HUMIDITY SENSOR 98
RHT RETURN HIGH TEMPERATURE 66
RMP REMOTE MINIMUM POSITION 98
SAS SUPPLY AIR SENSOR 91
SHT SUPPLY HIGH TEMPERATURE 66
TCI TRANE COMMUNICATION INTERFACE 63
TIOR TIMED OVERIDE 69
TCO1 HIGH LIMIT CUTOUT 72
TCO2 FAN FAILURE LIMIT 72
TNS1 CONTROL POWER TRANSFORMER 58
TNS2 IGNITION TRANSFORMER 41
RHV REHEAT VALVE 71
SHS SPACE HUMIDITY SENSOR 81
PHM PHASE MONITOR 13-15
XFR EXHAUST FAN RELAY 99
ZSM ZONE SENSOR MODULE 80
TDL1 THERMOSTAT DISCHARGE LINE CKT 1
TDL2 THERMOSTAT DISCHARGE LINE CKT 2
PPF6,PPM6 ECONOMIZER PLUG 90-102
PPF3 IGNITION CONTROL PLUG 50,75
PPF4,PPM4 IGNITER PLUG 50
PPF11,PPM11 COMBUSTION FAN MOTOR PLUG 41-46
LINE VOLTAGE
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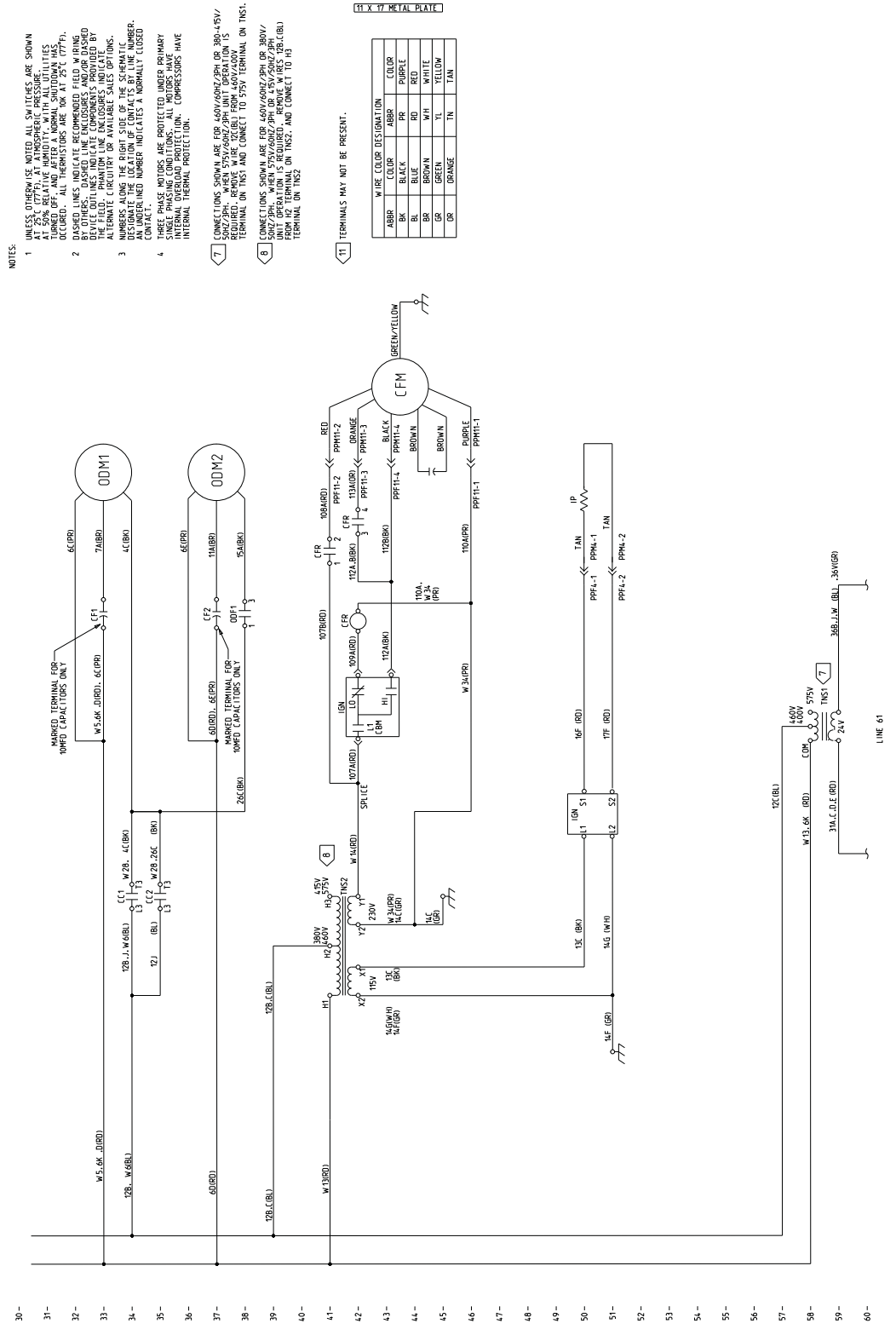
**Figure 4. (continued from previous page) YS*155F–250F**



# Typical Wiring

**Figure 5. YS*200F–250F**

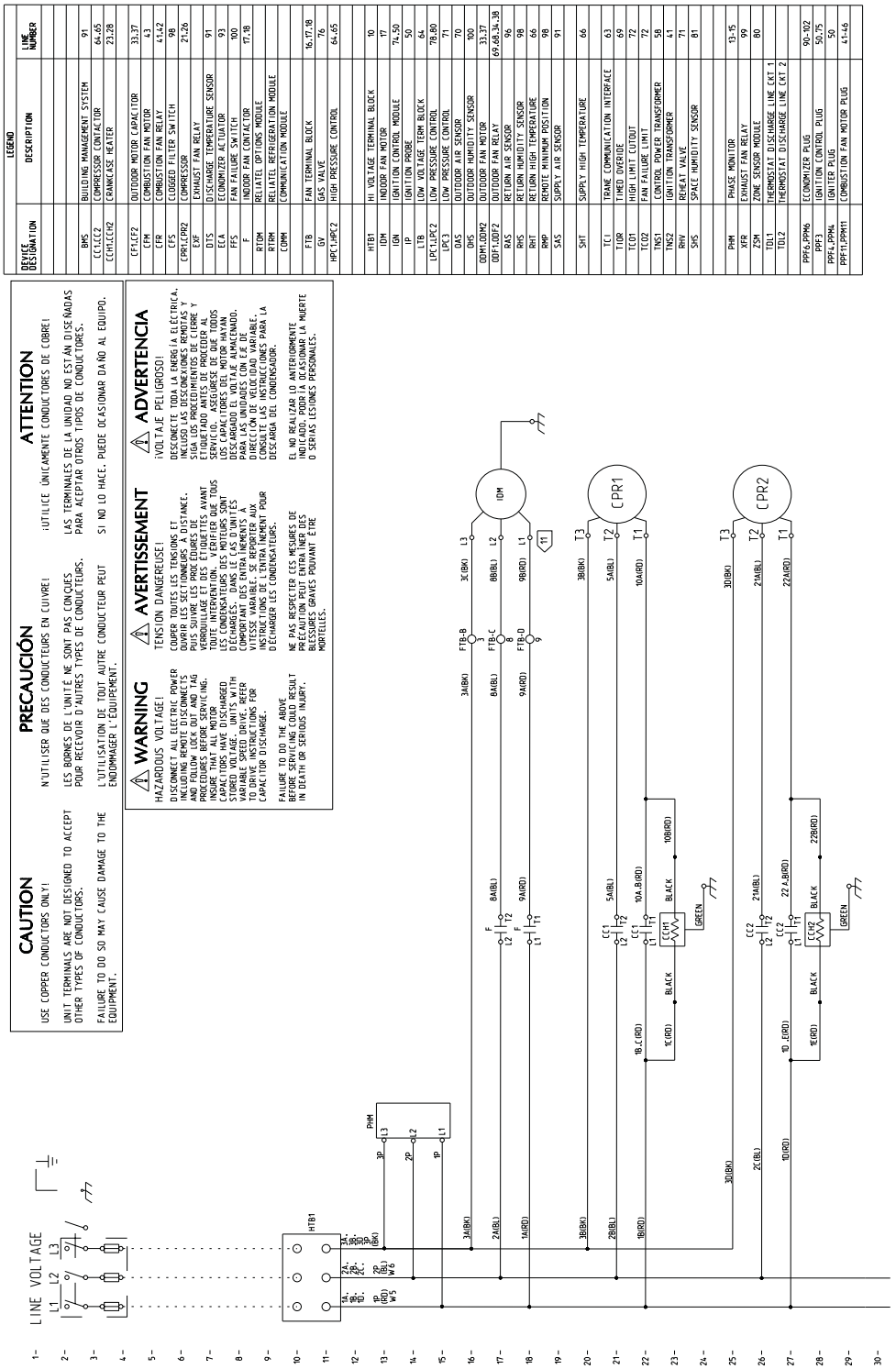


**Figure 5. (continued from previous page) YS*200F–250F**

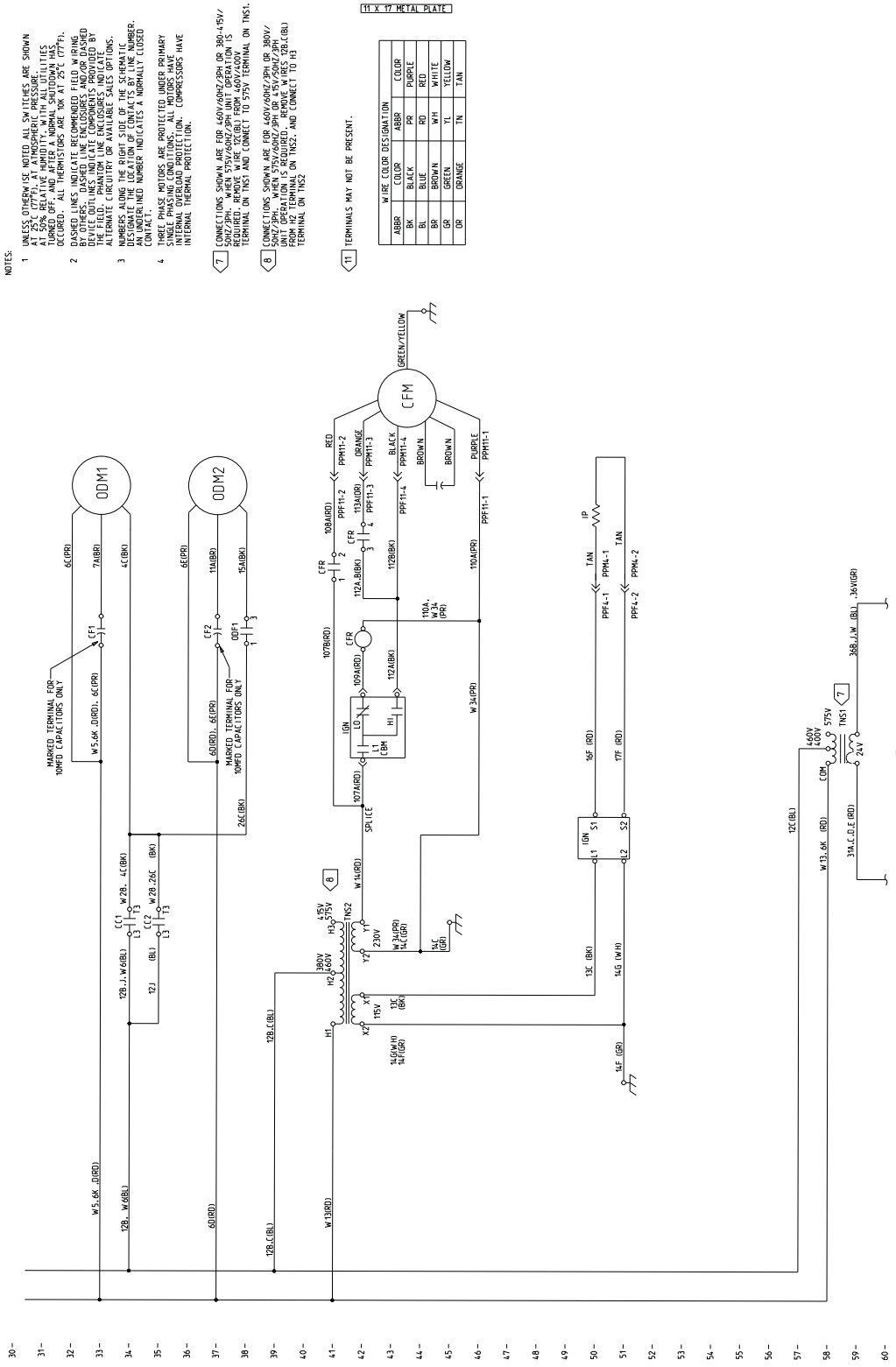


**Figure 6. TS*155F–250F**

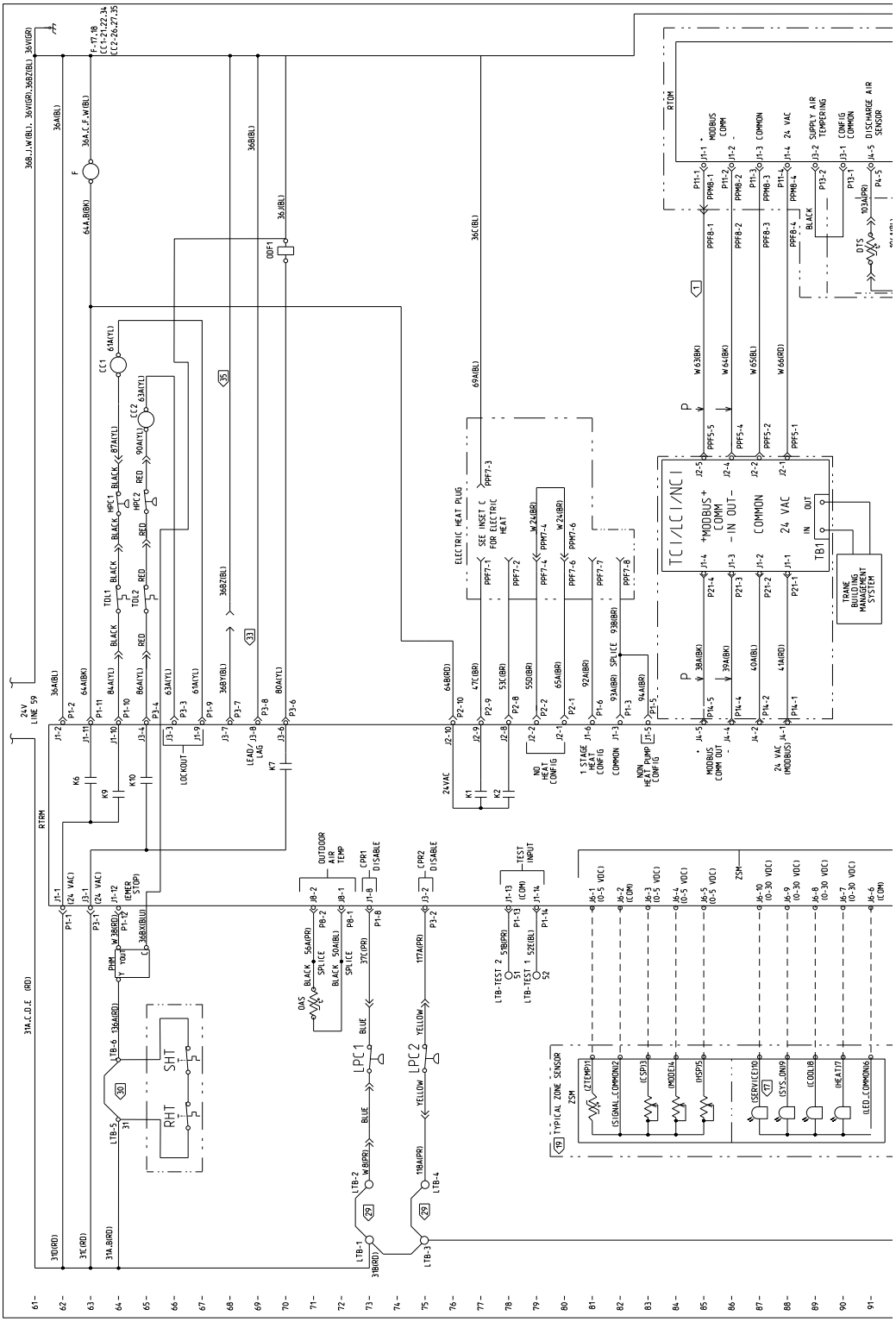


**Figure 6. (continued from previous page) TS*155F–250F**

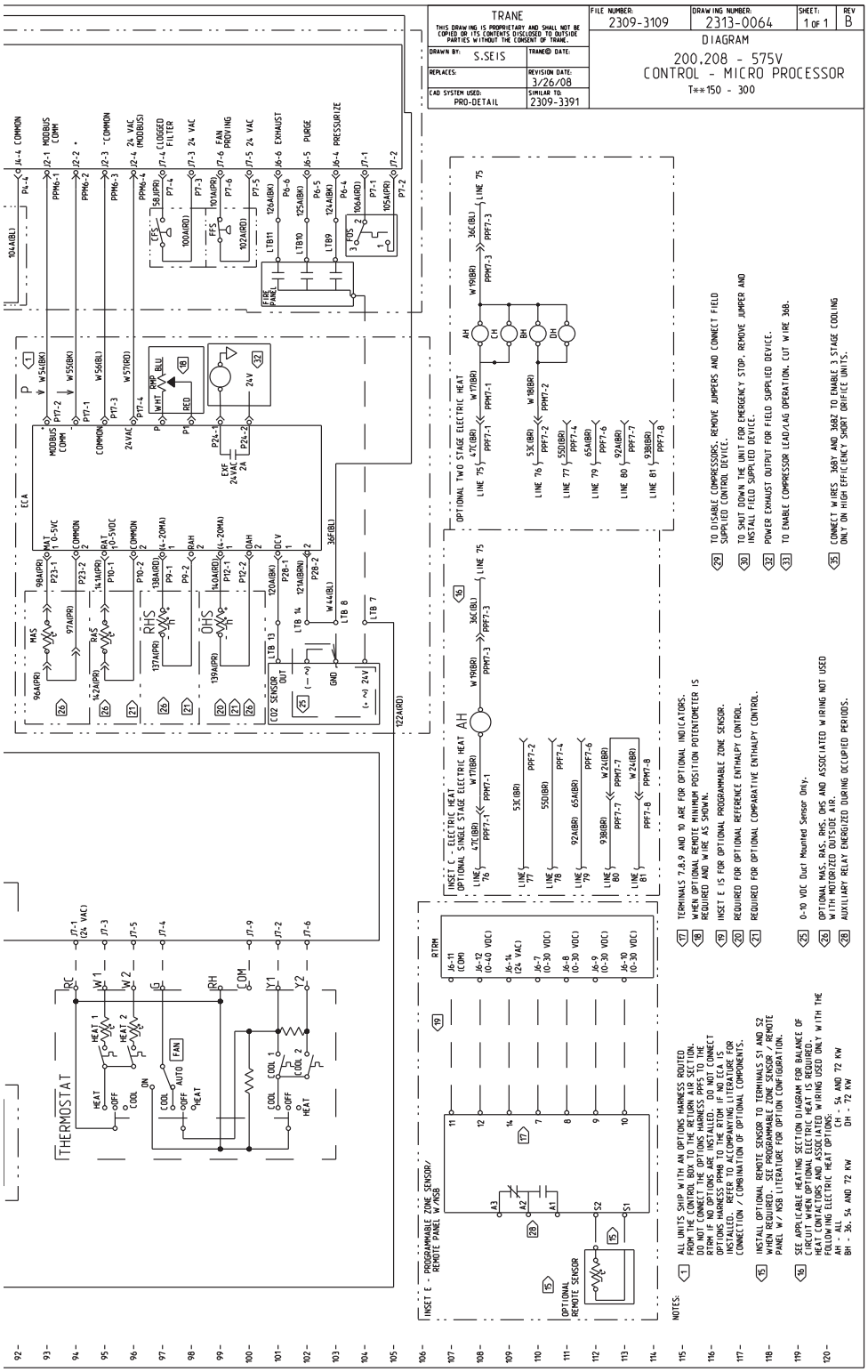


**Figure 7. YS*155F–250F**

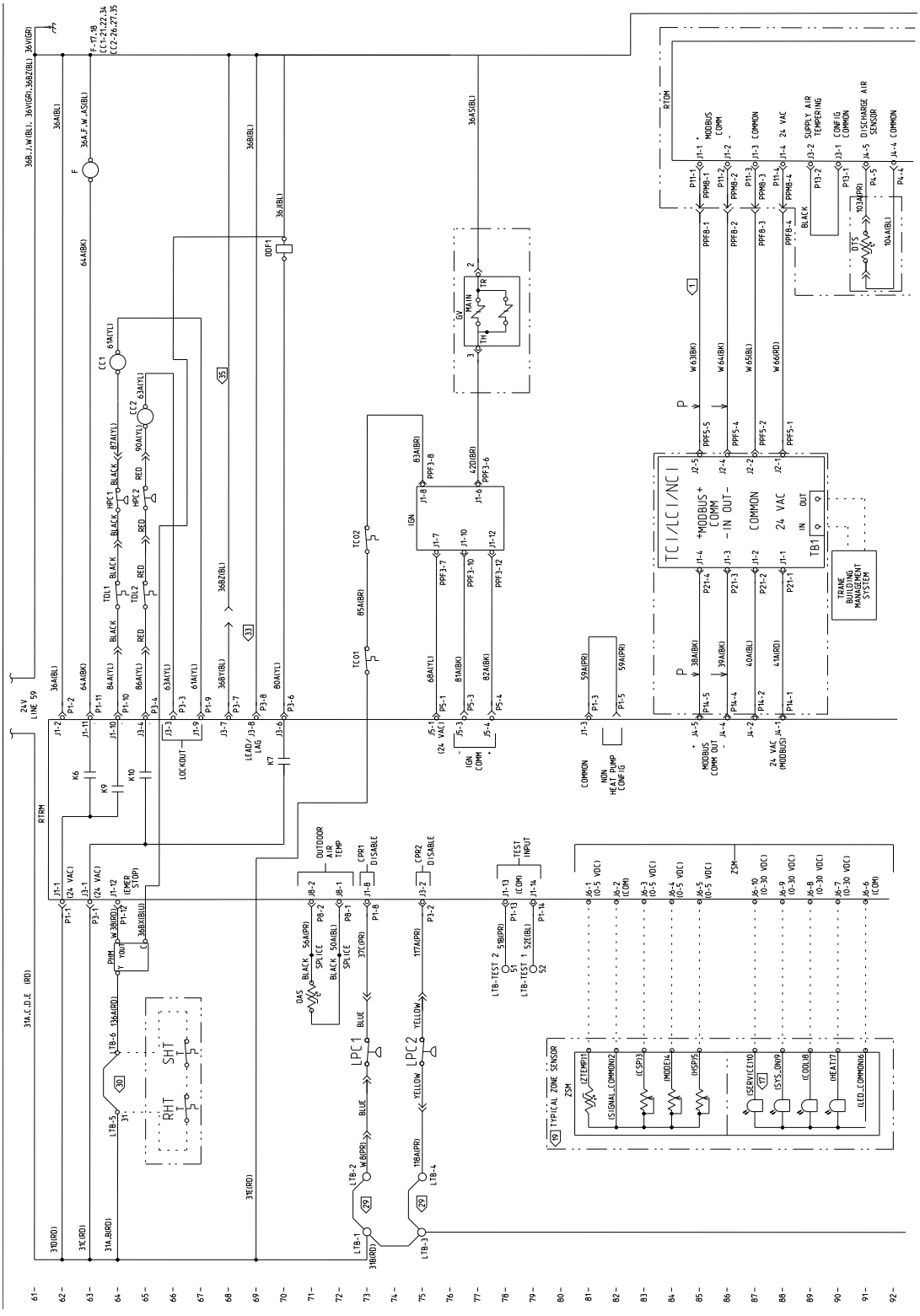


**Figure 7. (continued from previous page) YS*155F–250F**

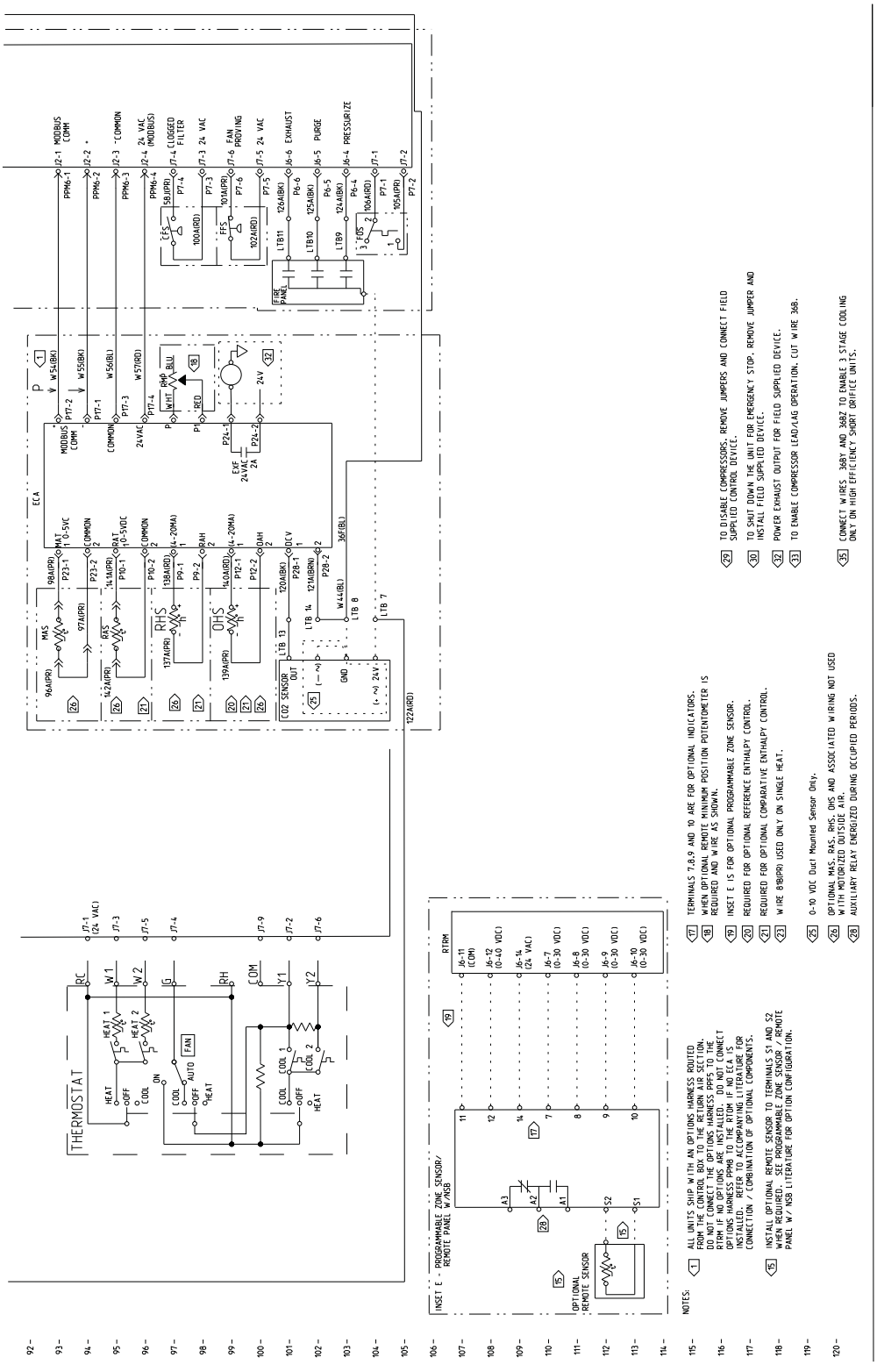


**Figure 8. WS*155E–250E**

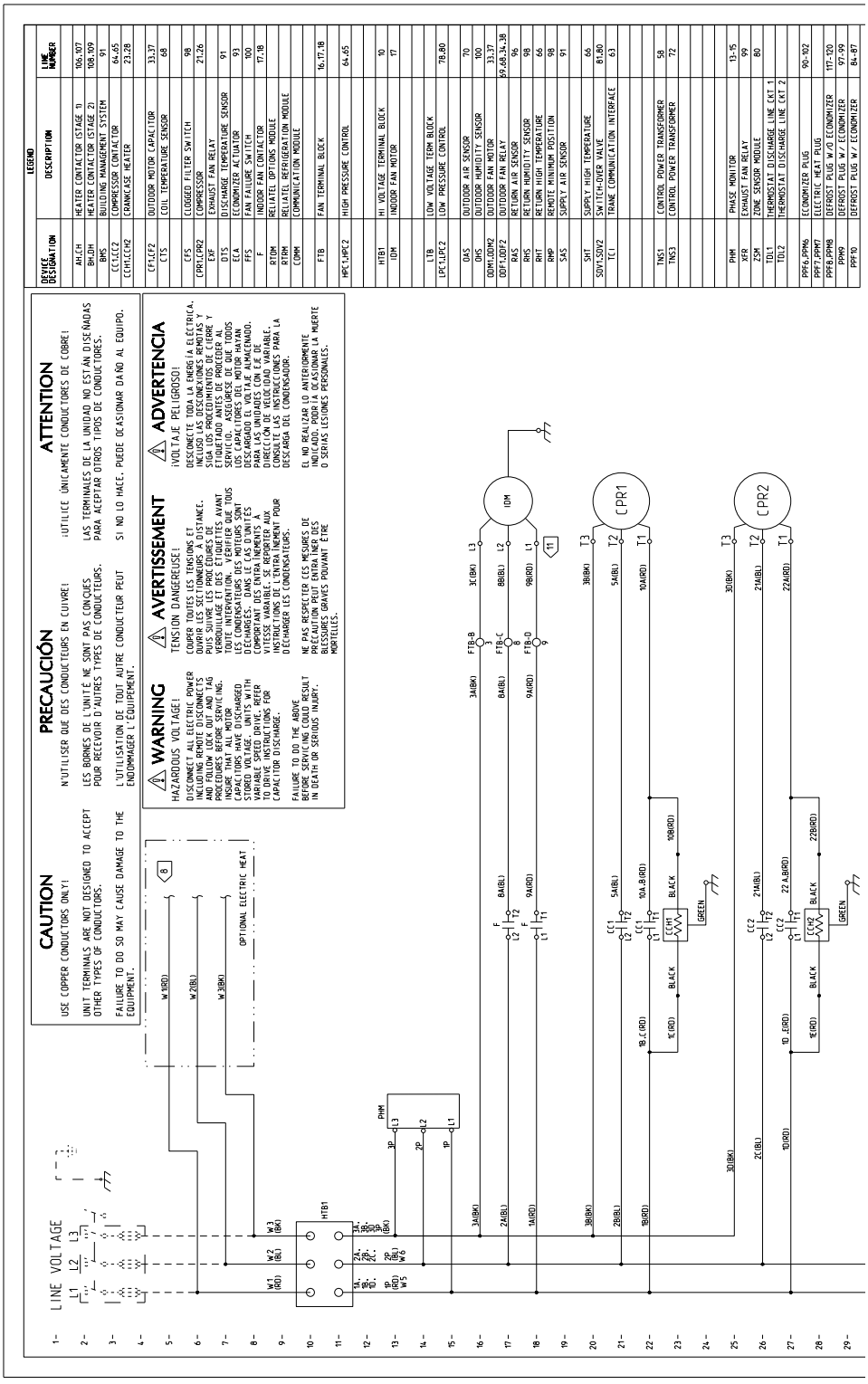
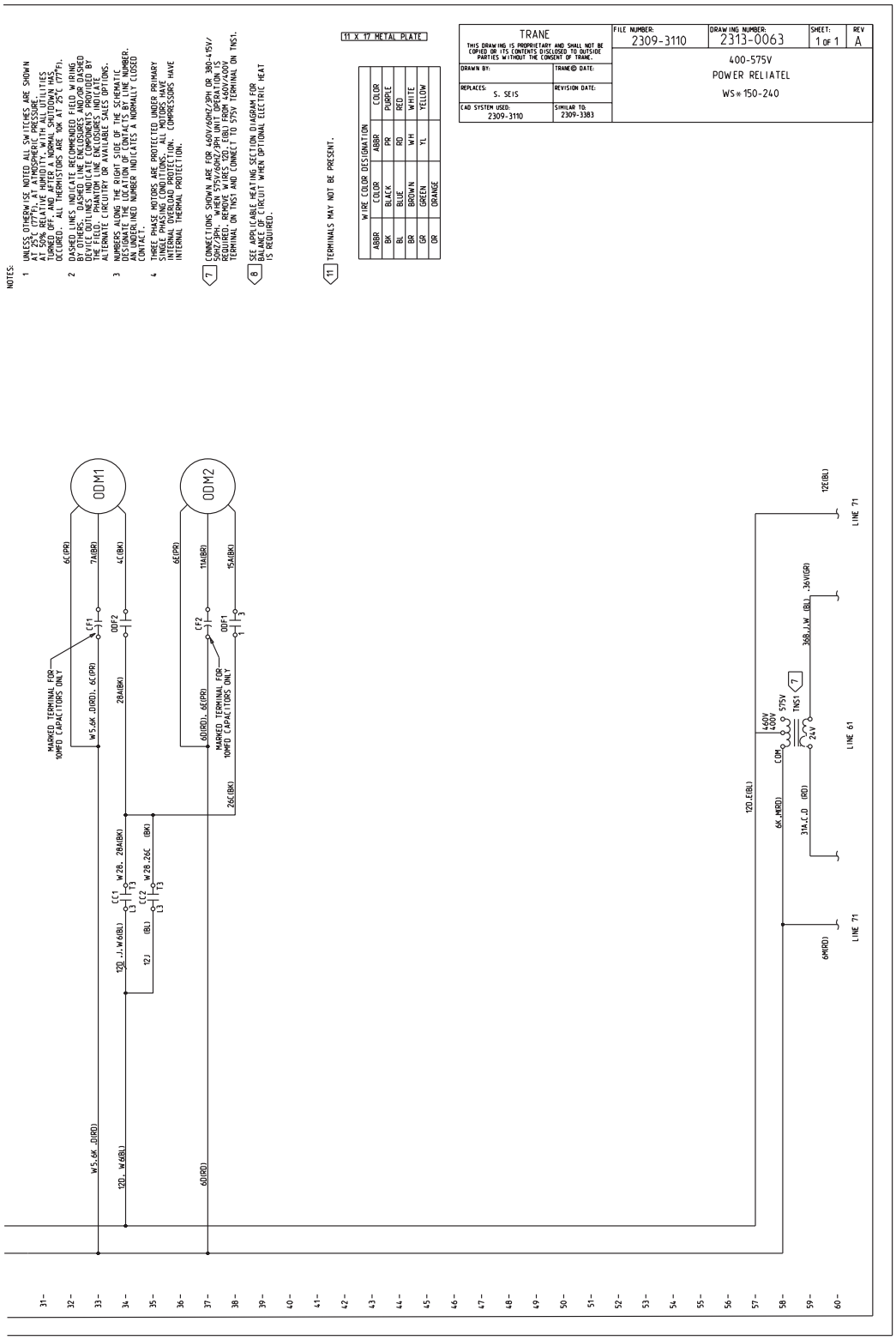


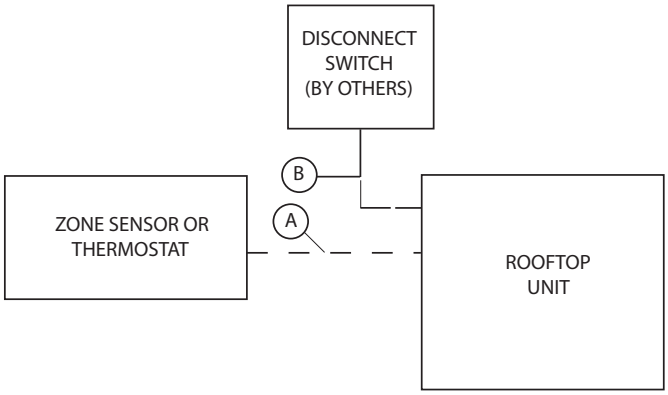
**Figure 8. (continued from previous page) WS*155E–250E**



# Jobsite Connections

**Table 68. Typical number of wires**

| | | |
|---|---|---|
| **Zone Sensors** | | |
| **A** | Manual Changeover | 4 |
| | Manual/Auto Changeover | 5 |
| | Manual/Auto Changeover with Status Indication LED's | 10 |
| | Programmable Night Setback with Status Indication LED's | 7 |
| **Thermostats** | | |
| **B** | 3 Power Wires + 1 Ground Wire (three phase) | |




*Notes:*

- *For specific wiring information, see the installation instructions.*
- *All wiring except power wire is low voltage.*
- *All customer supplied wiring to be copper and must conform to applicable electrical codes (such as NEC or CEC) and local electric codes. Wiring shown dotted is to be furnished and installed by the customer.*
- *Zone sensor required for units configured for Single Zone VAV indoor fan system control to enable Single Zone VAV functionality.*

# Dimensional Data

**Figure 9. Cooling with optional electric heat and gas/electric models—15–25 tons—downflow unit clearance**

* All dimensions are in inches/millimeters.

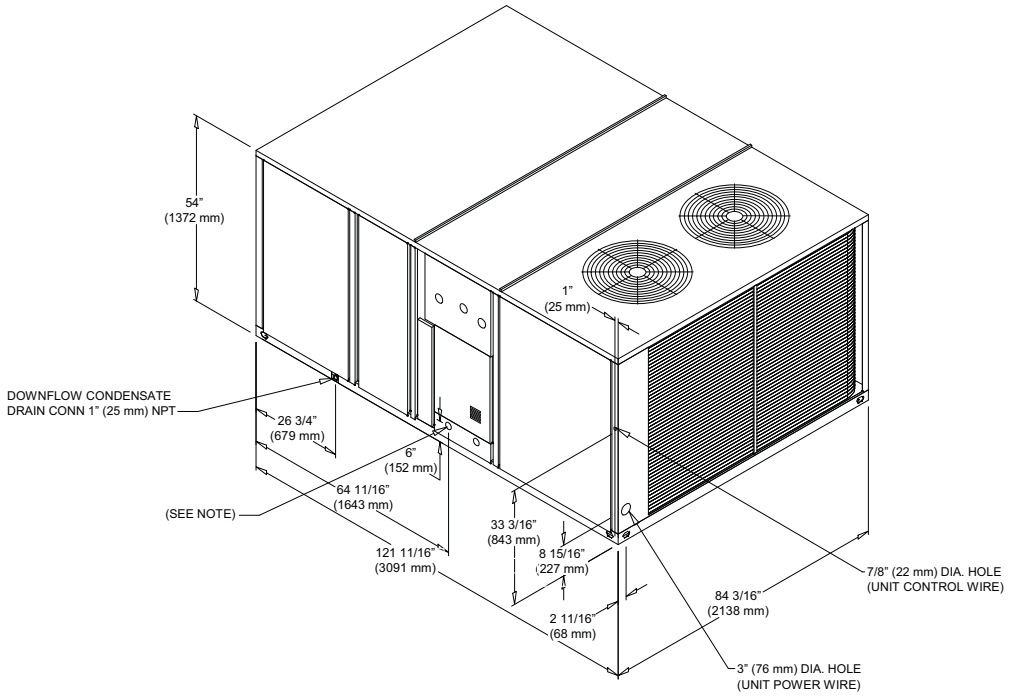
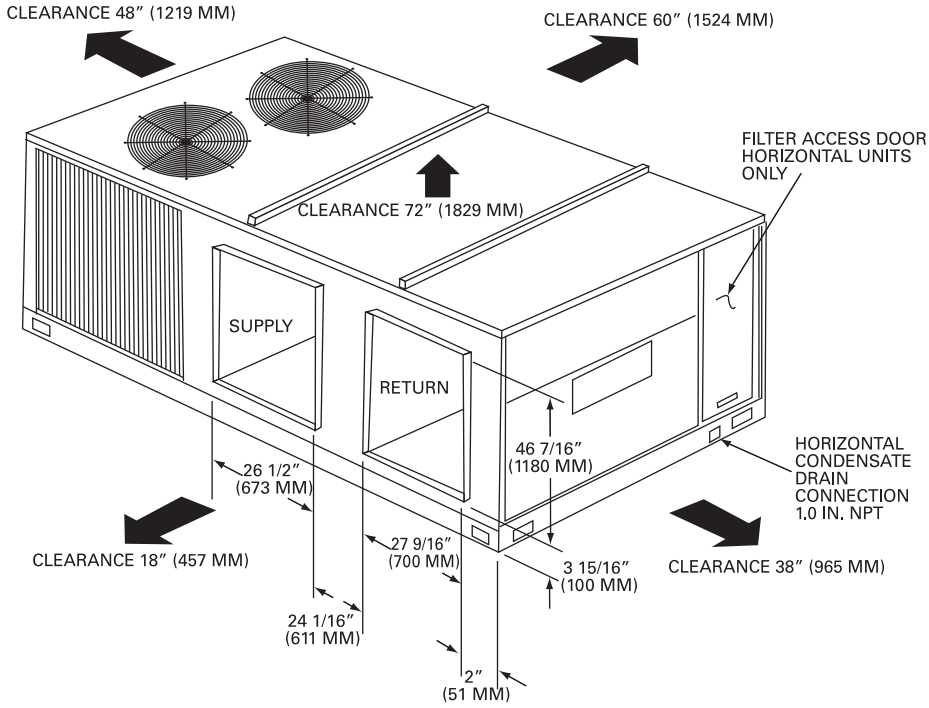



**Figure 10. Cooling with optional electric heat and gas/electric models–15–25 tons—unit clearance and horizontal unit supply/return**

* All dimensions are in inches/millimeters.



## Dimensional Data

**Figure 11. Heat pump—15 tons—downflow unit clearance**

* All dimensions are in inches/millimeters.

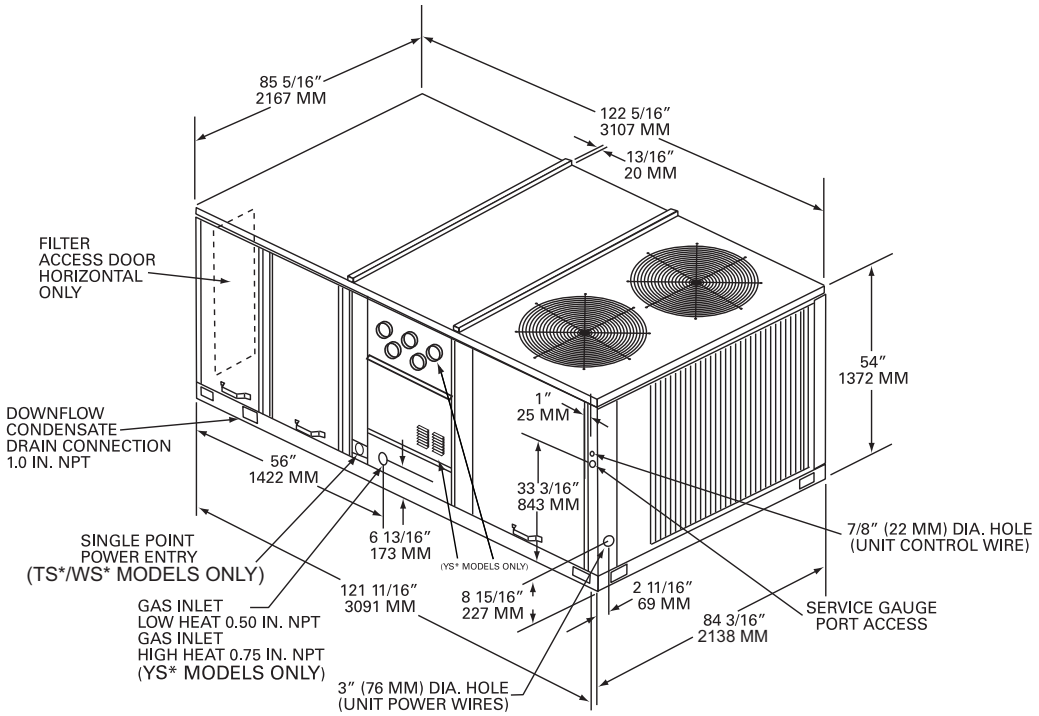



**Figure 12. Heat pump—15 tons—unit clearance and horizontal unit supply/return**

* All dimensions are in inches/millimeters.

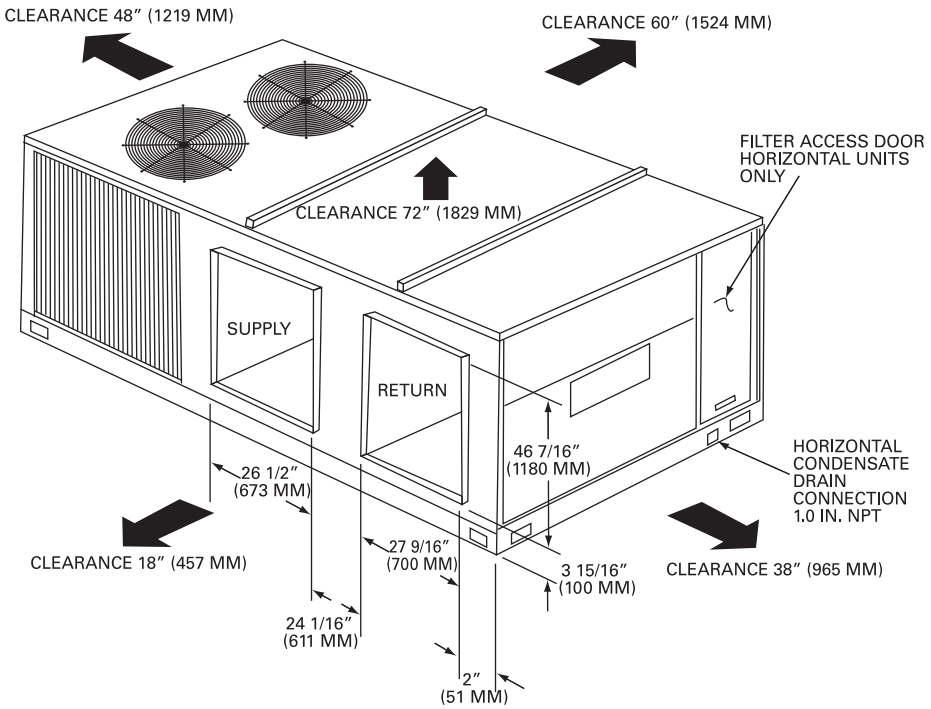


**Figure 13. Heat pump—20 tons—downflow unit clearance**

* All dimensions are in inches/millimeters.

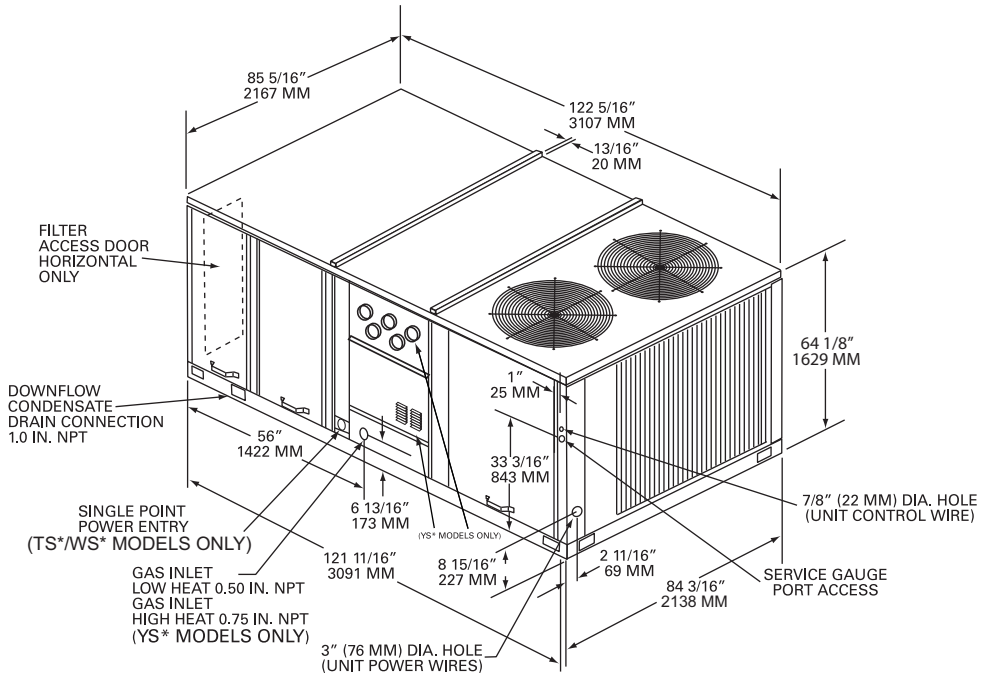



**Figure 14. Heat pump—20 tons—unit clearance and horizontal unit supply/return**

* All dimensions are in inches/millimeters.

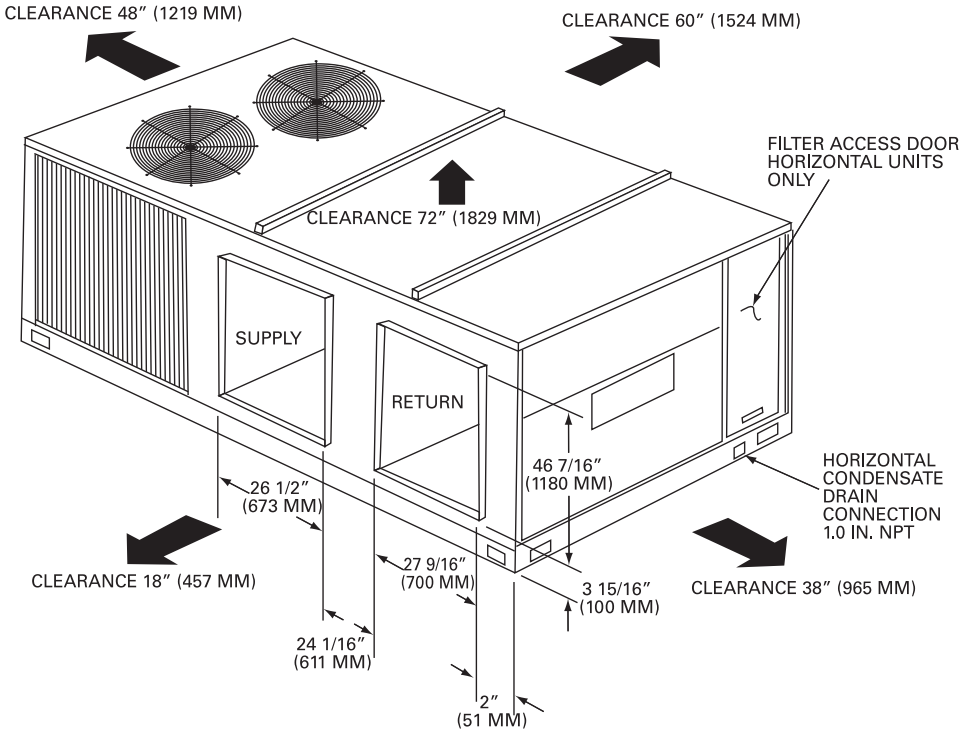


**Figure 15. Cooling and heat pump with optional electric heat and gas/electric models—15–25 tons—roof curb**

* All dimensions are in inches/millimeters.

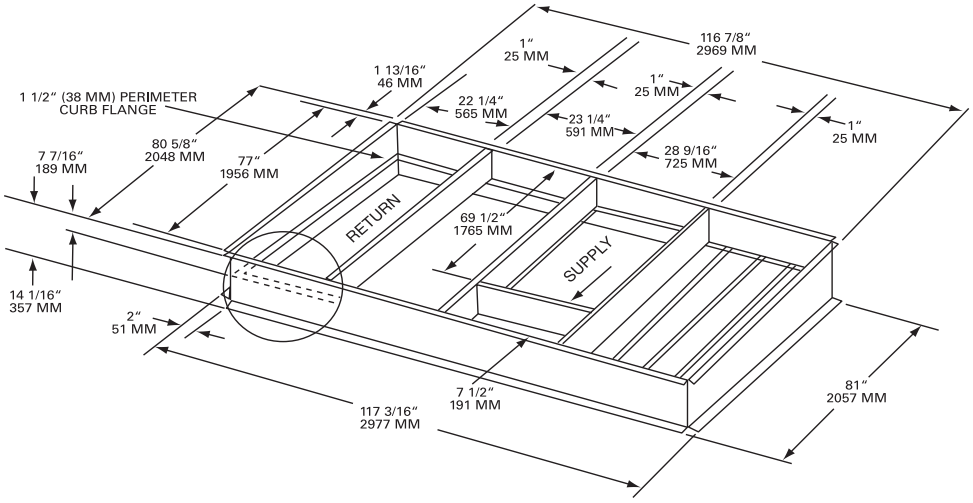



**Figure 16. Cooling and heat pump with optional electric heat and gas/electric models 15–25 tons—downflow duct connections—field fabricated**

* Duct flanges mount 7-7/16" (189mm) down inside the curb on the 1.5" (38mm) curb flanges. Roofcurb is intended for downflow use only.
* All dimensions are in inches/millimeters.

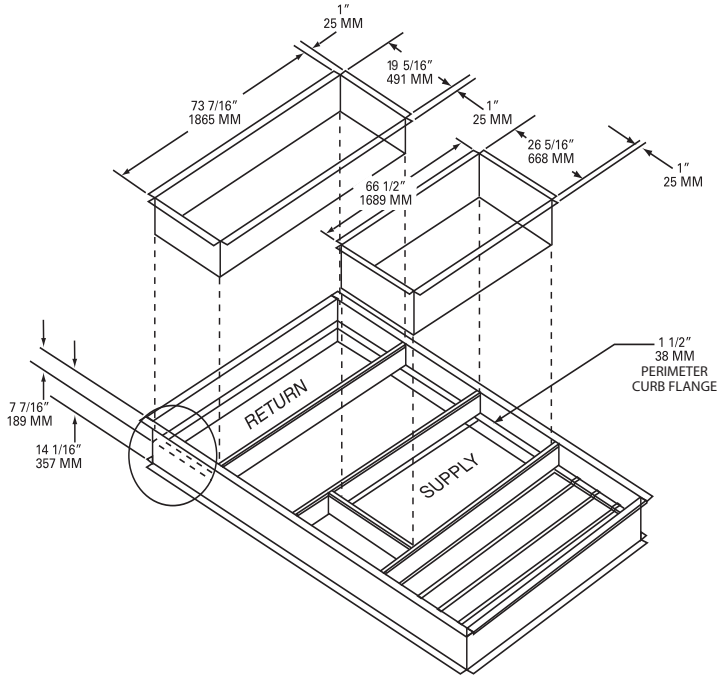


**Figure 17. Cooling and heat pump with optional electric heat and gas/electric models 15–25 tons—downflow unit clearance**

* All dimensions are in inches/millimeters.

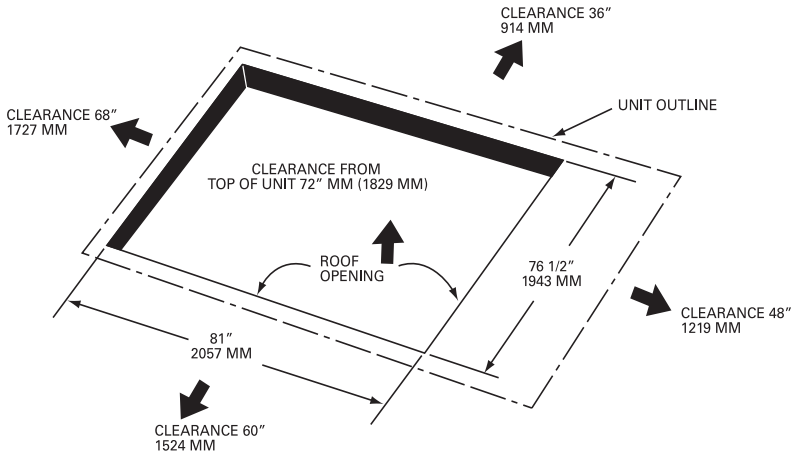



**Figure 18. Downflow & horizontal condensate locations**

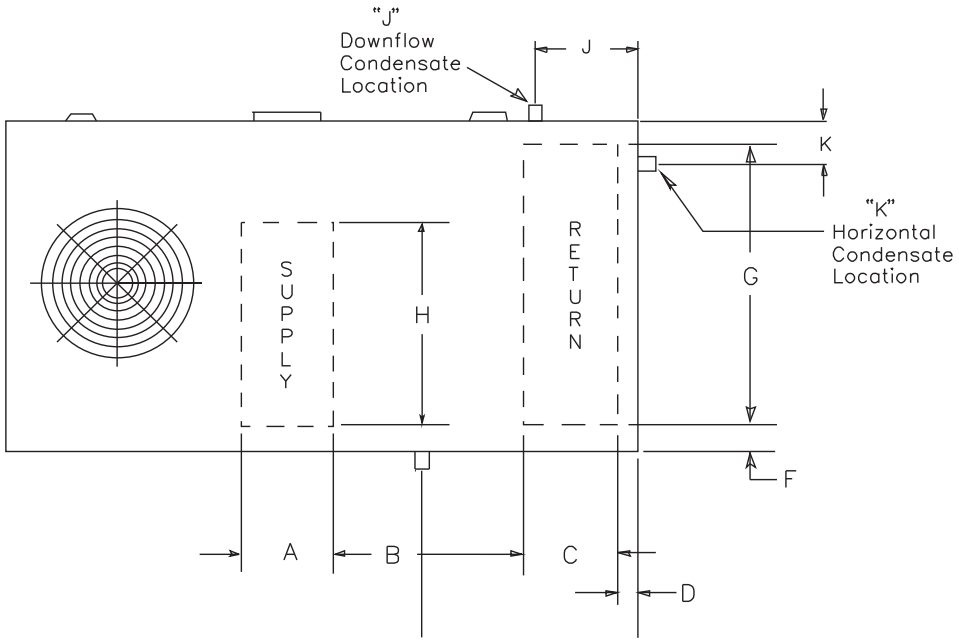



**Table 69. Standard efficiency units (cooling and gas/electric)**

| Tons | Downflow Only | | | | | | | Condensate Drain Size | Condensate Drain Location | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Downflow | Horizontal |
| | A | B | C | D | F | G | H | | J | K |
| 15–25 | 26 7/16" 672 mm | 28 3/4" 730 mm | 19 15/16" 506 mm | 4 1/4" 108 mm | 4 1/4" 108 mm | 76 5/16" 1938 mm | 68 11/16" 1745 mm | 1 NPT | 26 3/4" 679 mm | 5 3/8" 137 mm |

**Table 70. Cooling unit—swing diameter & through the base electrical**

| Unit Model # | A | B | C | D | E |
|---|---|---|---|---|---|
| TSD/YSD 155F, 175F, 200F, 250F, WSD155E, 200E | 29 1/2 | 56 | 38 1/2 | 18 1/2 | N/A |

**Note:** *All dimensions are in inches

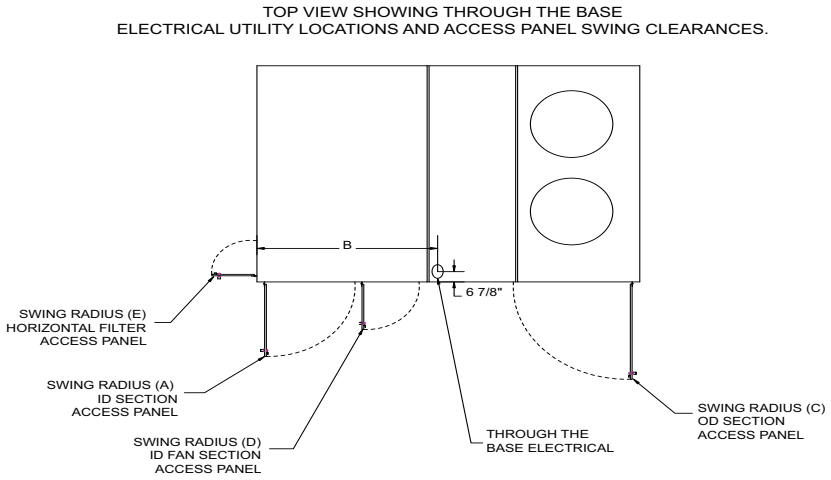



**Figure 19. Fresh air hood (horizontal units)**

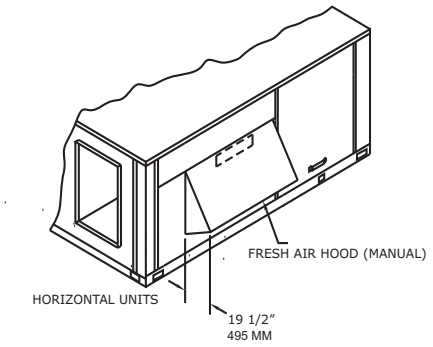



**Figure 20. Fresh air hood (downflow units)**

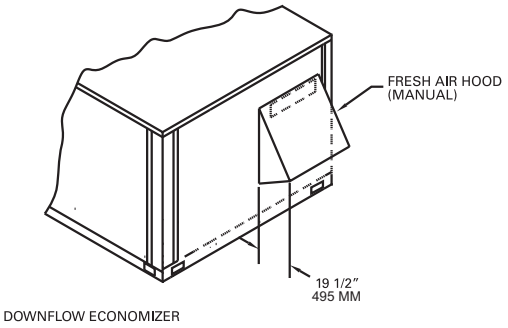



**Figure 21. Economizer - horizontal units**

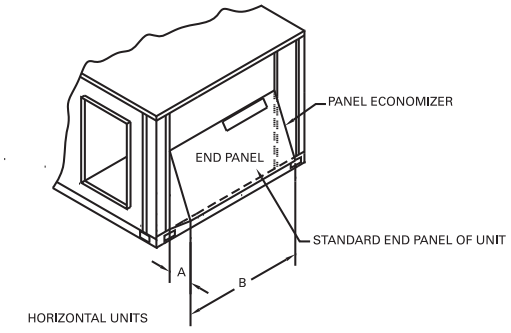
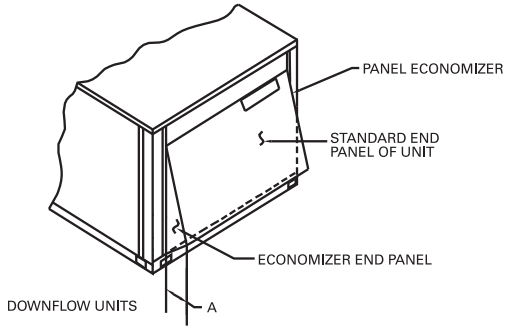



**Figure 22. Economizer - downflow units**




**Note:** When applying economizer to horizontal units, connected ductwork must be run full size to allow proper operation of economizer damper.

# Weights

**Table 71. TS* maximum unit and corner weights (kg) and center of gravity dimensions (mm)**

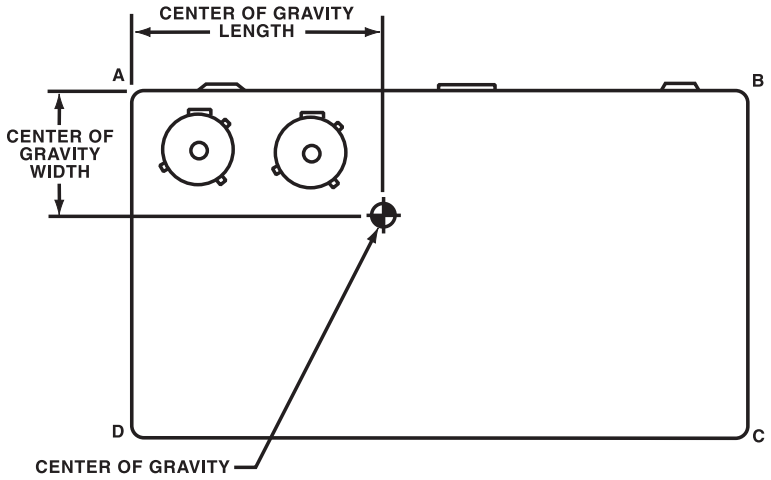
| | Max Weight (kg) | | Corner Weights (kg) | | | | Center of Gravity (mm) | |
|---|---|---|---|---|---|---|---|---|
| Model | Shipping | Net | A | B | C | D | Length | Width |
| TS*155F | 1022 | 826 | 268 | 226 | 162 | 170 | 149 | 86 |
| TS*175F | 1040 | 845 | 268 | 231 | 169 | 176 | 154 | 89 |
| TS*200F | 1068 | 873 | 278 | 233 | 170 | 191 | 145 | 90 |
| TS*250F | 1060 | 852 | 270 | 231 | 169 | 182 | 153 | 89 |

**Notes:**
1. Corner weights are given for information only. All models must be supported continuously by a curb or equivalent frame support.
2. Weights are approximate. Horizontal and downflow unit and corner weights may vary slightly.
3. *Indicates both horizontal and downflow units.

**Table 72. TS* maximum unit and corner weights (lb) and center of gravity dimensions (inches)**

| | Max Weight (lb) | | Corner Weights (lb) | | | | Center of Gravity (in) | |
|---|---|---|---|---|---|---|---|---|
| Model | Shipping | Net | A | B | C | D | Length | Width |
| TS*155F | 2253 | 1822 | 590 | 498 | 358 | 376 | 59 | 34 |
| TS*175F | 2292 | 1863 | 591 | 510 | 372 | 388 | 61 | 35 |
| TS*200F | 2353 | 1925 | 614 | 514 | 375 | 422 | 57 | 35 |
| TS*250F | 2337 | 1878 | 595 | 510 | 372 | 402 | 60 | 35 |

**Notes:**
1. Corner weights are given for information only. All models must be supported continuously by a curb or equivalent frame support.
2. Weights are approximate. Horizontal and downflow unit and corner weights may vary slightly.
3. *Indicates both horizontal and downflow units.



# Weights

*TS* Accessories*

### Table 73. TS* accessory net weights (kg/lb)[a], [b], [c]

| Model | Economizer | Outside Air Damper | | Roof Curb | Oversized Motor Adder[d] | All Zone Sensors | High Static Drive[d] | Low Static Drive[d] |
|---|---|---|---|---|---|---|---|---|
| | Net | Motorized | Manual | | | | | |
| TSD155F, 175F | — | — | — | — | — | — | — | — |
| TSD200F | 36/79 | 34/75 | 15/33 | 107/236 | 2/4 | 0.5/1 | 1/2 | — |
| TSD250F | 36/79 | 34/75 | 15/33 | 107/236 | — | 0.5/1 | — | 1/2 |
| TSH155F, 175F | — | — | — | — | — | — | — | — |
| TSH200F | 30/66 | 34/75 | 15/33 | — | 2/4 | 0.5/1 | 1/2 | — |
| TSH250F | 30/66 | 34/75 | 15/33 | — | — | 0.5/1 | — | 1/2 |

(a) Net weight should be added to unit weight when ordering factory installed accessories.
(b) For 600V heaters net weights are same as 480 V heaters.
(c) To estimate shipping weight add 2.3 kg (5 lb) to net weight.
(d) Downflow only.

### Table 74. TS* accessory net weights (kg)

| Models | Electric Heat | | | | |
|---|---|---|---|---|---|
| | 5–27 kW | 11–14 kW | 22–27 kW | 22–41 kW | 45–54 kW |
| | 380–415 kW | 380–415 kW | 380–415 kW | 380–415 kW | 380–415 kW |
| TS*155F, 175F | — | 9.5 | 12.3 | 14.5 | — |
| TS*200F | — | — | 12.3 | 14.5 | 15.4 |
| TS*250F | — | — | 12.3 | 14.5 | 15.4 |

**Notes:**
1. Net weight should be added to unit weight when ordering factory installed accessories.
2. For 600 V heaters net weights are same as 480 V heaters.
3. Not available on all models (see Fan Performance tables for specific models).
4. To estimate shipping weight add 5 lb (2.27 kg) to net weight.
5. TS*155F-250F factory installed options for economizers, multiply net capacity x 0.99, EER x 0.97. For oversized motors, multiply net capacity x 0.98, EER x 0.93.
6. * Indicates both downflow and horizontal units

### Table 75. TS* accessory net weights (lb)

| Models | Electric Heat | | | | |
|---|---|---|---|---|---|
| | 5–27 kW | 11–14 kW | 22–27 kW | 22–41 kW | 45–54 kW |
| | 380–415 kW | 380–415 kW | 380–415 kW | 380–415 kW | 380–415 kW |
| TS*155F, 175F | — | 21 | 27 | 32 | — |
| TS*200F | — | — | 27 | 32 | 34 |
| TS*250F | — | — | 27 | 32 | 34 |

**Notes:**
1. Net weight should be added to unit weight when ordering factory installed accessories.
2. For 600 V heaters net weights are same as 480 V heaters.
3. Not available on all models (see Fan Performance tables for specific models).
4. To estimate shipping weight add 5 lb (2.27 kg) to net weight.
5. TS*155F-250F factory installed options for economizers, multiply net capacity x 0.99, EER x 0.97. For oversized motors, multiply net capacity x 0.98, EER x 0.93.
6. * Indicates both downflow and horizontal units

**Table 76. YS* maximum unit and corner weights (kg) and center of gravity dimensions (mm)**

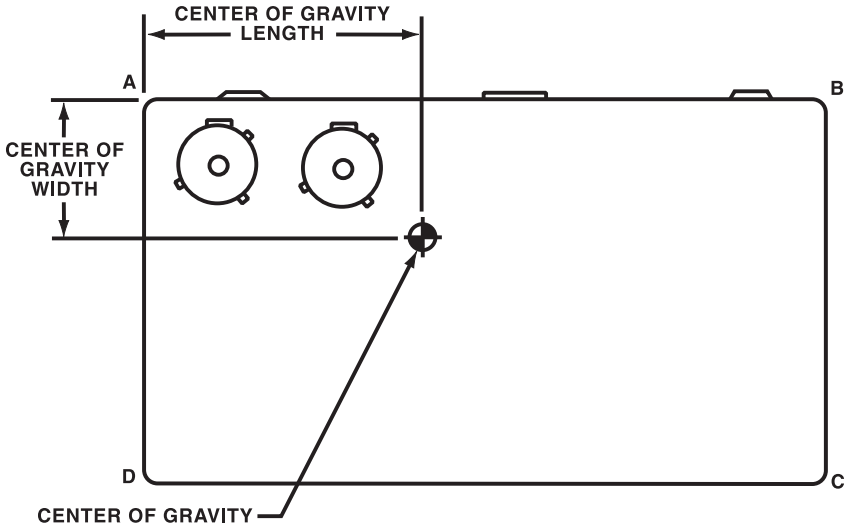
| | Max Weight | | Corner Weights | | | | Center of Gravity | |
|---|---|---|---|---|---|---|---|---|
| Model | Shipping | Net | A | B | C | D | Length | Width |
| YS*155F | 1100 | 888 | 285 | 242 | 175 | 184 | 148 | 86 |
| YS*175F | 1119 | 910 | 289 | 248 | 181 | 191 | 153 | 89 |
| YS*200F | 1147 | 939 | 299 | 250 | 182 | 206 | 145 | 90 |
| YS*250F | 1140 | 932 | 297 | 252 | 183 | 200 | 153 | 89 |

**Notes:**
1. Corner weights are given for information only. All models must be supported continuously by a curb or equivalent frame support.
2. Weights are approximate. Horizontal and downflow unit and corner weights may vary slightly.
3. *Indicates both horizontal and downflow units.

**Table 77. YS* maximum unit and corner weights (lb) and center of gravity dimensions (inches)**

| | Max Weight | | Corner Weights | | | | Center of Gravity | |
|---|---|---|---|---|---|---|---|---|
| Model | Shipping | Net | A | B | C | D | Length | Width |
| YS*155F | 2424 | 1958 | 628 | 534 | 387 | 406 | 58 | 34 |
| YS*175F | 2467 | 2007 | 637 | 547 | 400 | 421 | 60 | 35 |
| YS*200F | 2528 | 2069 | 659 | 551 | 402 | 455 | 57 | 35 |
| YS*250F | 2513 | 2054 | 655 | 555 | 403 | 442 | 60 | 35 |

**Notes:**
1. Corner weights are given for information only. All models must be supported continuously by a curb or equivalent frame support.
2. Weights are approximate. Horizontal and downflow unit and corner weights may vary slightly.
3. *Indicates both horizontal and downflow units.



### Table 78. YS* accessory net weights (kg)[a], [b]

| Model | Economizer | Outside Air Damper | | Roof Curb[d] | Oversized Motor Adder[c] | LPG Conversion Kit | All Zone Sensors | High Static Drive[c] | Low Static Drive[c] |
|---|---|---|---|---|---|---|---|---|---|
| | Net | Motorized | Manual | | | | | | |
| YSD155F, 175F | — | — | — | — | — | — | — | — | — |
| YSD200F | 36 | 34 | 15 | 107 | 2 | 2 | 0.5 | 1 | — |
| YSD250F | 36 | 34 | 15 | 107 | — | 2 | 0.5 | — | 1 |
| YSH155F, 175F | — | — | — | — | — | — | — | — | — |
| YSH200F | 30 | 34 | 15 | — | 2 | 2 | 0.5 | 1 | — |
| YSH250F | 30 | 34 | 15 | — | — | 2 | 0.5 | — | 1 |

(a) Net weight should be added to unit weight when ordering factory installed accessories.
(b) Not available on all models. (See fan performance table for specific models).
(c) YS*155F-250F factory installed options for economizers, multiply net capacity x 0.99, EER x 0.97. For oversize motors, multiply net capacity x 0.98, EER x 0.93.
(d) Downflow only.

### Table 79. YS* accessory net weights (lb)[a], [b]

| Model No | Economizer | Outside Air Damper | | Roof Curb[c] | Oversized Motor Adder[d] | LPG Conversion Kit | All Zone Sensors | High Static Drive[d] | Low Static Drive[d] |
|---|---|---|---|---|---|---|---|---|---|
| | Net | Motorized | Manual | | | | | | |
| YSD155F, 175F | — | — | — | — | — | — | — | — | — |
| YSD200F | 79 | 75 | 33 | 236 | 4 | 4 | 1 | 2 | — |
| YSD250F | 79 | 75 | 33 | 236 | | 4 | 1 | | 2 |
| YSH155F, 175F | — | — | — | — | — | — | — | — | — |
| YSH200F | 66 | 75 | 33 | — | 4 | 4 | 1 | 2 | — |
| YSH250F | 66 | 75 | 33 | — | | 4 | 1 | — | 2 |

(a) Net weight should be added to unit weight when ordering factory installed accessories.
(b) Not available on all models. (See fan performance table for specific models).
(c) Downflow only.
(d) YS*155F-250F factory installed options for economizers, multiply net capacity x 0.99, EER x 0.97. For oversize motors, multiply net capacity x 0.98, EER x 0.93.

**Table 80. WS* maximum unit and corner weights (kg) and center of gravity dimensions (mm)**

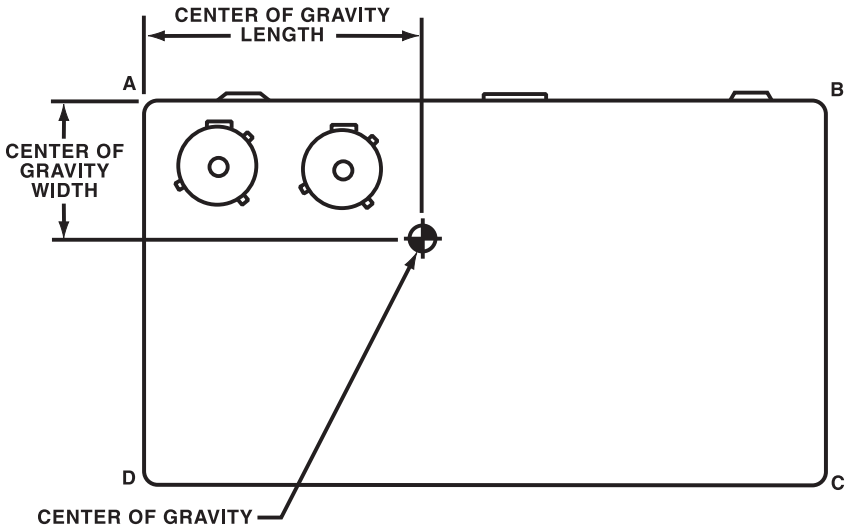
| | Max Weight | | Corner Weights | | | | Center of Gravity | |
|---|---|---|---|---|---|---|---|---|
| Model | Shipping | Net | A | B | C | D | Length | Width |
| WS*155E | 1105 | 899 | 288 | 234 | 171 | 207 | 1262 | 811 |
| WS*200E | 1164 | 956 | 306 | 220 | 181 | 268 | 1285 | 789 |

**Notes:**
1. Corner weights are given for information only. All models must be supported continuously by a curb or equivalent frame support.
2. *Indicates both horizontal and downflow units.

**Table 81. WS* maximum unit and corner weights (lb) and center of gravity dimensions (inches)**

| | Max Weight | | Corner Weights | | | | Center of Gravity | |
|---|---|---|---|---|---|---|---|---|
| Model | Shipping | Net | A | B | C | D | Length | Width |
| WS*155E | 2435 | 1982 | 634 | 515 | 377 | 456 | 56 | 36 |
| WS*200E | 2566 | 2107 | 674 | 485 | 400 | 590 | 57 | 35 |

**Notes:**
1. Corner weights are given for information only. All models must be supported continuously by a curb or equivalent frame support.
2. *Indicates both horizontal and downflow units.



# Weights

*WS* Accessories*

### Table 82. WS* accessory net weights (kg)[a], [b], [c], [d]

| Model | Economizer[e] | Outside Air Damper | | Roof Curb | Oversized Motor Adder[e] | All Zone Sensors | High Static Drive[f] | Low Static Drive[f] |
|---|---|---|---|---|---|---|---|---|
| | Net | Motorized | Manual | | | | | |
| WSD155E | — | — | — | — | — | — | — | — |
| WSD200E | 36 | 34 | 15 | 107 | 2 | 0.5 | 5 | — |
| WSH155E | — | — | — | — | — | — | — | — |
| WSH200E | 30 | 34 | 15 | — | — | 0.5 | 7 | — |

(a) To estimate shipping weight add 2.3 kg to net weight.
(b) Downflow only.
(c) Not available on all models (see fan performance tables for specific models).
(d) D = Downflow unit, H = Horizontal unit.
(e) Net weight should be added to unit weight when ordering factory installed accessories.
(f) Multiply by 1.25 for net weight of 200–230 V rated heaters.

### Table 83. WS* accessory net weights (lb)[a], [b], [c], [d]

| Model | Economizer[e] | Outside Air Damper | | Roof Curb | Oversized Motor Adder[e] | All Zone Sensors | High Static Drive[f] | Low Static Drive[f] |
|---|---|---|---|---|---|---|---|---|
| | Net | Motorized | Manual | | | | | |
| WSD155E | — | — | — | — | — | — | — | — |
| WSD200E | 79 | 75 | 33 | 236 | 4 | 1 | 11 | — |
| WSH155E | — | — | — | — | — | — | — | — |
| WSH200E | 66 | 75 | 33 | — | — | 1 | 15 | — |

(a) To estimate shipping weight add 2.3 kg to net weight.
(b) Downflow only.
(c) Not available on all models (see fan performance tables for specific models).
(d) D = Downflow unit, H = Horizontal unit.
(e) Net weight should be added to unit weight when ordering factory installed accessories.
(f) Multiply by 1.25 for net weight of 200–230 V rated heaters.

### Table 84. WS* accessory net weights (kg)

| Models | Electric Heat | | | | |
|---|---|---|---|---|---|
| | 5–27 kW | 11–14 kW | 22–27 kW | 22–41 kW | 45–54 kW |
| | 380–415 kW | 380–415 kW | 380–415 kW | 380–415 kW | 380–415 kW |
| WS*155E | — | 9.5 | 12.3 | 14.5 | — |
| WS*200E | — | — | 12.3 | 14.5 | 15.4 |

**Notes:**
1. Net weight should be added to unit weight when ordering factory installed economizer or oversize motor.
2. Not available on all models (see Fan Performance tables for specific models).
3. To estimate shipping weight add 2.3 kg to net weight.
4. Downflow only.
5. * Indicates both downflow and horizontal units

### Table 85. WS* accessory net weights (lb)

| Models | Electric Heat | | | | |
|---|---|---|---|---|---|
| | 5–27 kW | 11–14 kW | 22–27 kW | 22–41 kW | 45–54 kW |
| | 380–415 kW | 380–415 kW | 380–415 kW | 380–415 kW | 380–415 kW |
| WS*155E | — | 21 | 27 | 32 | — |
| WS*200E | — | — | 27 | 32 | 34 |

**Notes:**
1. Net weight should be added to unit weight when ordering factory installed economizer or oversize motor.
2. Not available on all models (see Fan Performance tables for specific models).
3. To estimate shipping weight add 5 lb to net weight.
4. Downflow only.
5. * Indicates both downflow and horizontal units

# Mechanical Specifications

## General

The units shall be dedicated downflow or horizontal airflow. The operating range shall be between 115°F and 0°F in cooling as standard from the factory for all units. Cooling performance shall be rated in accordance with ARI testing procedures. All units shall be factory assembled, internally wired, fully charged with R-410A, and 100 percent run tested to check cooling operation, fan and blower rotation and control sequence, before leaving the factory. Wiring internal to the unit shall be colored and numbered for simplified identification.

## Casing

Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. Exterior surfaces shall be cleaned, phosphatized, and finished with a weather-resistant baked enamel finish. Unit's surface shall be tested 500 hours in a salt spray test in compliance with ASTM B117. Cabinet construction shall allow for all maintenance on one side of the unit. In order to ensure a water and air tight seal, service panels shall have lifting handles and no more than three screws to remove. All exposed vertical panels and top covers in the indoor air section shall be insulated with a 1/2-inch, 1-pound density foil-faced, fire-resistant, permanent, odorless, glass fiber material. The base of the downflow unit shall be insulated with 1/2-inch, 1-pound density foil-faced, closed-cell material. The downflow unit's base pan shall have no penetrations within the perimeter of the curb other than the raised 11/8-inch high supply/return openings to provide an added water integrity precaution, if the condensate drain backs up. The base of the unit shall have provisions for forklift and crane lifting.

## Discharge Line Thermostat

A bi-metal element discharge line thermostats installed as a standard option on the discharge line of each system. This standard option provides extra protection to the compressors against high discharge temperatures in case of loss of charge, extremely high ambient and other conditions which could drive the discharge temperature higher. Discharge line thermostat is wired in series with high pressure control. When the discharge temperature raises high above the protection limit, the bi-metal disc in the thermostat switches to off position to open the 24 Vac circuit. When the temperature on discharge line cools down, the bi-metal disc closes the contactor circuit to provide power to compressor. When the thermostat opens the fourth time, the ReliaTel™ control must be manually reset to resume operation on that stage.

## Unit Top

The top cover shall be one piece, or where seams exist, double hemmed and gasket sealed to prevent water leakage.

## Filters

Two inch standard filters shall be factory supplied on all units. Optional 2-inch MERV 8 and MERV 13 filters with a filter removal too shall also be available.

## Compressors

All units shall have direct-drive, hermetic, scroll type compressors with centrifugal type oil pumps. Motor shall be suction gas-cooled and shall have a voltage utilization range of plus or minus 10 percent of nameplate voltage. Internal overloads shall be provided with the scroll compressors. All models shall have crankcase heaters, low and high pressure control as standard.

## Crankcase Heaters

These band heaters provide improved compressor reliability by warming the oil to prevent migration during off-cycles or low ambient conditions. These are standard on all Voyager™ models.

## Refrigerant Circuits

Each refrigerant circuit shall have independent fixed orifice or thermostatic expansion devices, service pressure ports, and refrigerant line filter driers factory installed as standard. An area shall be provided for replacement suction line driers.

## Evaporator and Condenser Coils

Internally finned, 5/16" copper tubes mechanically bonded to a configured aluminum plate fin shall be standard for evaporator coils. Condenser coils may also be microchannel type (major design sequence F units only). Coils shall be leak tested at the factory to ensure the pressure integrity. The evaporator coil and condenser coil shall be leak tested to 225 psig and pressure tested to 450 psig. All dual compressor units shall have intermingled evaporator coils. Sloped condensate drain pans are standard. Round tube plate fin type condenser coils are patent-pending 1+1+1 coils, permanently gapped for easy cleaning.

## Gas Heating Section

The heating section shall have a drum and tube heat exchanger design using corrosion resistant steel components. A forced combustion blower shall supply premixed fuel to a single burner ignited by a pilotless hot surface ignition system. In order to provide reliable operation, a negative pressure gas valve shall be used that requires blower operation to initiate gas flow. On an initial call for heat, the combustion blower shall purge the heat exchanger 45 seconds before ignition. After three unsuccessful ignition attempts, the entire heating system shall be locked out until manually reset at the thermostat. Units shall be suitable for use with natural gas or propane (field installed kit) and shall also comply with California requirements for low $NO_x$ emissions. The 15–25 tons shall have two stage heating (Gas/Electric Only).

## Outdoor Fans

The outdoor fan shall be direct-drive, statically and dynamically balanced, draw-through in the vertical discharge position. The fan motor(s) shall be permanently lubricated and shall have built-in thermal overload protection.

## Indoor Fan

Units above shall have belt driven, FC centrifugal fans with adjustable motor sheaves. Units with standard motors shall have an adjustable idler-arm assembly for quick-adjustment of fan belts and motor sheaves. All motors shall be thermally protected. Oversized motors shall be available for high static application. All indoor fan motors meet the U.S. Energy Policy Act of 1992 (EPACT).

## Controls

Unit shall be completely factory wired with necessary controls and contactor pressure lugs or terminal block for power wiring. Unit shall provide an external location for mounting a fused disconnect device. ReliaTel controls shall be provided for all 24-volt control functions. The resident control algorithms shall make all heating, cooling, and/or ventilating decisions in response to electronic signals from sensors measuring indoor and outdoor temperatures. The control algorithm maintains accurate temperature control, minimizes drift from set point, and provides better building comfort. A centralized control shall provide anti-short cycle timing and time delay between compressors to provide a higher level of machine protection.

## Defrost Controls

Adaptive demand defrost shall be provided to permit defrost wherever coil icing conditions begin to significantly reduce unit capacity.

# Factory Installed Options

### Black Epoxy Coated Pre-Coated Coils

The black epoxy coils have a thermoset vinyl coating that is bonded to the aluminum fin stock prior to the fin-stamping process. The pre-coated coils are an economical option for protection in mildly corrosive environments.

### $CO_2$ Sensor Wiring

The unit wiring for field installed $C0_2$ sensors. Factory-installed $C0_2$ sensor wiring saves time and ensures proper unit connections for the field installed $C0_2$ sensor kits.

### Complete Coat™ Microchannel Condenser Coil

The cathodic epoxy type electrodisposition coating is formulated for high edge build to a number of different types of heat exchangers. The coating is selected to provide excellent resistance and durability to corrosive effects of alkalies, acids, alcohols, petroleum, seawater, salty air and other corrosive environments. This coating shall be available on microchannel condenser coils.

### Condensate Overflow Switch

This option shall shut the unit down in the event that a clogged condensate drain line prevents proper condensate removal from the unit.

### Hinged Access Doors

Sheet metal hinges are available on the Filter, Evaporator, Fan/Motor and the Compressor/Control Access Doors. This option is available on all models.

### Stainless Steel Drain Pan

This option provides excellent corrosion and oxidation resistance. Drain pan shall be reversible and constructed of 304 stainless steel.

### Stainless Steel Heat Exchanger

Gas heat exchanger shall be of drum and tube design constructed from a minimum 304 Grade stainless steel. The stainless steel heat exchanger shall have a 10-year warranty as standard (Gas/Electric Only).

### Through the Base Electrical with Circuit Breaker

This option is a thermal magnetic, molded case, HACR Circuit Breaker with provisions for through the base electrical connections. The circuit breaker will be installed in a water tight enclosure in the unit with access through a swinging door. Factory wiring will be provided from the switch to the unit high voltage terminal block. The circuit breaker will provide overcurrent protection, be sized per NEC and UL guidelines, and be agency recognized by UL/CSA. This option is available on all downflow models.

### Through the Base Electrical With Disconnect Switch

Three-pole, molded case, disconnect switch with provisions for through the base electrical connections are available. The disconnect switch will be installed in the unit in a water tight enclosure with access through a swinging door. Factory wiring will be provided from the switch to the unit high voltage terminal block. The switch will be UL/CSA agency recognized.

*Note: The disconnect switch will be sized per NEC and UL guidelines but will not be used in place of unit overcurrent protection. This option is available on all downflow models.*

### Through the Base Utilities Access

An electrical service entrance shall be provided allowing electrical access for both control and main power connections inside the curb and through the base of the unit. Option will allow for field installation of liquid-tight conduit and an external field installed disconnect switch.

### Two-Inch Pleated Filters

Two-inch MERV 8 and MERV 13 media filters with filter removal tool shall be available on all models.

## Factory or Field Installed Options

### Clogged Filter/Fan Failure Switch

A dedicated differential pressure switch is available to achieve active fan failure indication and/or clogged filter indication. These indications will be registered with either a zone sensor with status indication lights or an Integrated Comfort™ System.

These options allow for individual fan failure and dirty filter indication. The fan failure switch will disable all unit functions and “flash” the Service LED on the zone sensor. The dirty filter switch will light the Service LED on the zone sensor and will allow continued unit operation.

### Discharge Air Sensing Kit

This kit provides true discharge air sensing in heating models. This sensor is a status indicator readable through Tracer™ or Tracker™. The kit is functional only with the ReliaTel™ Options Module.

### Economizer—Downflow

The assembly includes fully modulating 0–100 percent motor and dampers, barometric relief, minimum position setting, preset linkage, wiring harness with plug, fixed dry bulb and spring return actuator. The barometric relief damper shall be standard with the downflow economizer and shall provide a pressure operated damper that shall be gravity closing and shall prohibit entrance of outside air during the equipment “off” cycle. Solid state enthalpy and differential enthalpy control shall be field-installed.

### Electric Heaters

Electric heat modules shall be available for installation within the basic unit. Electric heater elements shall be constructed of heavy-duty nickel chromium elements internally delta connected for 240 volt, wye connected for 480 and 600 volt. Staging shall be achieved through ReliaTel. Each heater package shall have automatically reset high limit control operating through heating element contactors. All heaters shall be individually fused from the factory, where required, and shall meet all NEC and CEC requirements when properly installed. Power assemblies shall provide single-point connection. Electric heat modules shall be UL listed or CSA certified. If ordering the Through the Base Electrical option with an Electric Heater, the heater must be factory installed.

### Frostat

This option is to be utilized as a safety device. The Frostat opens when temperatures on the evaporator coil fall below 10°F. The temperature will need to rise to 50°F before closing. This option should be utilized in low airflow or high outside air applications.

### LonTalk® Communications Interface

The LonTalk communications interface, when installed in a Voyager unit, allows the unit to communicate as a Tracer LCI-V device or directly with generic LonTalk Network Building Automation System Controls.

### Trane Communication Interface

This factory or field-installed option shall be provided to interface ReliaTel controlled units with the Trane Integrated Comfort systems.

# Field Installed Options

### Barometric Relief

Designed to be used on downflow units, barometric relief is an unpowered means of relieving excess building pressure.

### $CO_2$ Sensor

The $CO_2$ sensor shall have the ability to monitor the concentration (parts per million, ppm) of $CO_2$ (Carbon Dioxide) in the air. As the $CO_2$ concentration changes, the outside air damper modulates to meet the current ventilation needs of the zone.

*Note: Choose factory-installed CO2 sensor wiring option to save time and ensure proper unit connections for the field installed CO2 sensor kits.*

### Digital Display Zone Sensor

The Digital LCD (Liquid Crystal Display) zone sensor has the look and functionality of standard zone sensors. This sensor includes a digital display of set point adjustment and space temperature in F (Fahrenheit) or C (Celsius). Includes FAN and SYSTEM buttons (supports the service functions of the standard sensor). E-squared memory stores last programmed set points. Requires 24 Vac (Volts AC). This sensor should be utilized with ReliaTel™ controls.

### Economizer—Horizontal

The horizontal economizer shall contain the same features as the downflow economizer with the exception of barometric relief.

### High Static Drive

The high static drive option shall allow the standard motor on the 15-, 20-, and 25-ton units to operate with improved external static capabilities.

### Low Static Drive

The low static drive option shall allow the standard motor on the 17½- and 20-ton to operate at low static conditions.

### Manual Outside Air Damper

The rain hood and screen shall provide up to 25 percent outside air.

### Motorized Outside Air Dampers

Manually set outdoor air dampers shall provide up to 50 percent outside air. Once set, outdoor air dampers shall open to set position when indoor fan starts. The damper shall close to the full closed position when indoor fan shuts down.

### Reference or Comparative Enthalpy

Reference Enthalpy is used to measure and communicate outdoor humidity. The unit receives and uses this information to provide improved comfort cooling while using the economizer. Comparative Enthalpy measures and communicates humidity for both outdoor and return air conditions, and return air temperature. The unit receives and uses this information to maximize use of economizer cooling, and to provide maximum occupant comfort control. Reference or Comparative Enthalpy option shall be available when a field installed Downflow Economizer is ordered. This option is available on all models.

The powered exhaust shall provide exhaust of return air, when using an economizer, to maintain better building pressurization.

### Roof Curb—Downflow

The roof curb shall be designed to mate with the downflow unit and provide support and a water tight installation when installed properly. The roof curb design shall allow field-fabricated rectangular supply/return ductwork to be connected directly to the curb. Curb design shall comply with NRCA requirements. Curb shall be shipped knocked down for field assembly and shall include wood nailer strips.

### Economizer—Horizontal

The horizontal economizer shall contain the same features as the downflow economizer with the exception of barometric relief.

### Oversized Motors

Oversized motors shall be available for high static applications.

### Remote Potentiometer

The minimum position setting of the economizer shall be adjusted with this accessory.

### Tool-less Hail Guards

Tool-less, hail protection quality coil guards are available for condenser coil protection.

### Ventilation Override Accessory

With the Ventilation Override Accessory installed, the unit can be set to transition up to three different pre-programmed sequences for Smoke Purge, Pressurization, and Exhaust. The transition occurs when a binary input on the RTOM is closed (shorted). This would typically be a hard wired relay output from a smoke detector or fire control panel.

### Zone Sensors

This option shall be provided to interface with the Micro equipped Voyagers and shall be available in either manual, automatic, programmable with night setback, with system malfunction lights or remote sensor options.

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